

ASSUMPTIONS

THE GREAT CRUSTAL SHIFT HOAX

The Truth They Tried to Hide!



Kevin W Jameson, MSc



THE GREAT CRUSTAL SHIFT HOAX

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The Great Crustal Shift Hoax of Catastrophism

The Truth They Tried to Hide!



THE GREAT CRUSTAL SHIFT HOAX

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Author's Note

I first learned about the ideas of catastrophism and crustal shifts around 2019 from Ben Davidson and his team on the *Suspicious Observers* YouTube channel. I was fascinated by the stories, the excellent video animations, and the scientific data and research papers being presented there. Many other people were fascinated as well – at the time of this writing, the channel had more than 700,000 subscribers and more than 5,000 videos posted over its lifetime of about ten years.

The contributing team included astronomers, research scientists, lab experimenters, video script writers, animators, editors, and probably many others. The project also went well beyond the YouTube channel. There were books, conferences, and even a ranch project where like-minded people could gather and survive the upcoming catastrophe in the (best estimates) 2030-2050 range.

I thought to myself, “Wow, how could I have missed this upcoming event? Why isn’t the world doing anything about it?” I couldn’t ignore it and the 700K+ subscriber count, so I set a goal to figure out what I should do about it for my own life.

The Story That Intrigued Me – The Earth Disaster Cycle

The main story of catastrophism is one of the recurrent catastrophes that destroy civilizations. You can see a summary of the theory in the shorter 2023 version [Earth Disaster is Coming | All the Evidence](#) Video (16:45) (Davidson2023) or the original, longer 2021 version [THE Earth Disaster Cycle](#) Video (1:33:22) (Davidson2021-2) on the Suspicious Observers YouTube channel.

To orient yourself to the topic, you might want to watch these two videos before reading this book.

The two videos, the website, and the *thousands of* daily 5-minute video summaries produced by Davidson contain an *onslaught* of advanced astronomical, solar, electromagnetic, geophysical, and geological evidence that is overwhelming. That was true even for me, and I have been lucky enough to have a lifetime of education and reading in the fundamentals of many of the natural sciences. Even so, much of the content was (and still is) beyond me. It took me a few years and reading some of Davidson’s books to get up to speed and identify the core ideas of the Earth Disaster Cycle theory.

Cracks in the Earth Disaster Cycle Theory

But then, one day, I had learned enough about the galaxy, the solar system, and space weather to get past the geophysical research papers presented in the daily videos. I could move forward to the next major step in the disaster cycle – the giant shift of the Earth’s crust that would rotate the polar ice caps to the equator with all the floods and destruction that would go along with it. The Earth Disaster Cycle video claimed that *the entire crustal shell of the Earth* would shift 90 degrees from the poles to the equator in about one day (or less). That’s a planetary-sized claim, to say the least.



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Much to my surprise, I found a complete scientific desert around this key aspect of the disaster cycle.

There was no serious discussion of the event to be found anywhere. Nothing. Nada. Not even the simplest numerical estimates for a crustal shift can be found anywhere in the *Suspicious Observers* videos or books. Not even the simplest discussion of the laws of physics involved.

Absolutely no reasonable evidence or discussion anywhere.

It seemed to me that there was now a planetary-sized hole in the Earth Disaster Cycle theory.

Reading 70 Years of Books on Crustal Shift Theories

Because of that discovery, I read all the recent books on catastrophism and crustal shifts and chose the four most relevant books to review in this book. Those books describe work done or books written between 1948 and 2021, spanning a period of about 70 years.

After reading the books, I could see where the crustal shift theories came from. I could also see how they had been carried forward for 70 years *without any serious attempt by any author* to seriously engage with the simple physics of a crustal shift event.

By simple physics, I mean the simple mathematics and physics that have been taught for many decades in high school and first-year university physics programs all around the world. Any competent first-year university physics student could easily show that crustal shifts are impossible within the known laws of physics and nature. The most complex formula is the volume of a sphere, which is often taught in junior-high middle school.

Shouldn't any responsible author of a crustal shift theory include these very basic calculations in their theory? You would think so, but none of the four crustal shift authors did. So, I explain the simple calculations in this book. The calculations show that *all four of the crustal shift theories call for the crustal shell of the Earth to be accelerated to the speed of the fastest Learjet (500+ MPH) during the pole-to-equator shift and then decelerated back to zero MPH*. All in 24 hours. Impossible nonsense! That's why I call it a hoax.

The hoax began in 1958 with Hapgood's book *Earth's Shifting Crust* (Hapgood1958). Einstein, the physicist, played along with the hoax and wrote the foreword to give the book more credibility. (I use the word *hoax* because Hapgood's 457-page book (with Einstein playing along) used an *imaginary* centrifugal force and some obscure and incomplete mathematics designed to baffle the public and cover up the fakery). Imagine that! The "great" physicist Einstein played along with an *imaginary* centrifugal force that is taught in first-year university courses. So much for the great physicist.

Later, both the books by Chan Thomas, *The Adam and Eve Story* (Thomas1963), and Davidson, *The Next End of the World* (Davidson2021-1) copied Hapgood's imaginary centrifugal force for their own crustal shift theories.



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Why didn't they show any of the simple math or numerical estimates? Maybe it would have been too embarrassing for them to talk about the crust of the Earth moving as fast as the fastest Learjet (or even 2x-4x faster than the fastest Learjet, in the book by Thomas). Or maybe the simple math and physics really were beyond the capability of all the authors.

Writing This Book

By this point, I had read the four books and studied the trail of a 70-year hoax that is still going strong today on the *Suspicious Observers* YouTube channel. The idea of crustal shifts started with Hapgood in the 1950s and was blindly copied forward by successive authors without any attempt to engage with the reality and simple physics of the event.

I decided to write this book to give a realistic physics perspective on the crustal shift theories. After reading this book, you won't have to worry about crustal shifts, ever. You won't have to worry about crustal shifts, oceanic floods and slosh-backs, or prepping for a crustal shift disaster by ripping up your life to move to higher grounds to avoid the imaginary floods.

My main hope is that you will enjoy reading the story of the hoax, learn a bit about physics, and marvel at the planetary-sized hoax as I did!



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Prologue

The story of *crustal shifts* is an interesting one. The story includes ancient unsolved mysteries in the geological record, extreme dangers for Earth and its populations, mysterious solar forces that initiate recurrent catastrophes, and a cast of characters that includes a military research team, classified documents, famous scientists, and the infamous CIA of the United States.

The story begins with the geologists and historians of the world, who have had a big problem for hundreds of years. The geological record is full of strange evidence that doesn't make any sense. For example, the many geological anomalies include evidence of ocean fossils high up in the mountains, evidence of glaciers in the equatorial tropical regions, evidence of tropical tree fossils in polar regions, and the discovery of different types of rocks and minerals far from their expected locations.

To explain the strange evidence in strange places in the geological record, the geologists wanted to create a reasonable theory that would move the polar regions to the equator and back. That way, they could explain the finding of tropical tree fossils in the polar regions.

They might have considered a theory that allowed for a warmer (even tropical) climate at the poles millions of years ago (like the Expanding Earth theory). Or they might have explored a workable theory of giant floods that could move chunks of tropical tree fossils into the polar regions (like Velikovsky's *Worlds in Collision* did (Velikovsky 1950)).

Instead, they wanted to find a theory that moved the poles of the Earth to the tropics long enough to grow some tropical plants and then move the plants and regions back to their original polar regions. *And* they didn't want to flip the crustal shell only once – they wanted to flip the poles of the Earth multiple times. They wanted a theory of *recurrent* polar flips to the equator and back.

Enter the USAF military and its *Project Nanook* in 1946-1948 to study Arctic navigation and find the North Magnetic Pole. Oops! Not good! The magnetic pole had accelerated hundreds of miles away from where it was supposed to be. Worse yet, the geological record had associated magnetic pole excursions and 180-degree pole flips with previous catastrophes in Earth's past.

The military hired a contractor (RAND) to do some lab experiments to explain what was going on, and the contractor came back and said, "When the magnetic pole reaches the geographic north pole, it will whip around the geographic pole, flip down 90 degrees to somewhere near the equator, and draw the Earth's magnetized crust with it." Naturally, the military immediately classified the results to hide them from the public.

At about the same time, in 1950, Velikovsky published his book *Worlds in Collision*. The book was a catastrophe for the geological and astronomical worlds because it made them look like they were



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asleep for missing the greatest astronomical event in known history. The book shocked the entire world and still shocks new readers to this day.

Velikovsky's book reported *hundreds* of eyewitness testimonies from the written and oral histories of peoples from around the world, circa 1500 BC, only 3500 hundred years ago. All the stories said essentially the same thing – the Earth went crazy with conflagrations, gigantic floods, volcanoes, massive earthquakes, and fiery rocks and brimstones rained down from the sky.

Moreover, the testimonies spoke of the Sun losing its way in the heavens, reversing course halfway through the day, rising in the East, then West, then East, and moving obliquely and in all four directions across the sky. North became South and then North again, *and the earth turned over*.

Hundreds of eyewitnesses from around the world reported the same thing and wrote it down or passed on the stories through oral history. It's hard to ignore that kind of evidence.

Velikovsky's book created an even bigger problem for the geologists, the military, and the CIA. Now, the public knew about the Earth turning over based on testimonies from eyewitnesses. Not good! How could they calm down the people again? At first, the hoaxers figured they could publicly mock Velikovsky's evidence and put out a more rational and scientific theory that would capsize the entire Earth by 90 degrees to get the poles to the equator and back to their original location. Then, they could calm the public down by saying that the capsize would happen slowly, *very slowly*, over many thousands of years so that the public wouldn't worry about it.

But they ran into another big problem. They couldn't explain where to get enough energy to flip the entire planet. Oops! In the end, they concluded that they needed a good hoax to mislead the public.

Enter Charles Hapgood, the college professor. His coauthor, James Campbell, was an engineer and conceived the idea of a *crustal shift*. The good thing about a crustal shift, according to Hapgood's book, is that a shift needs far less energy than capsizing the whole planet. They could fake the energy needs by telling the public that the imaginary centrifugal force could spin the heavy, unbalanced polar ice caps to the equator. And how many people in the public would know that the centrifugal force was an *imaginary* force taught in first-year physics courses? Almost no one! The hoax was looking better with every layer of confusion.

Hapgood worked for the organization that later became the CIA. He wrote a fat, 450-page, seemingly authoritative book to carry out the mission. The book was filled with the names of dozens of collaborators who worked in many different fields, such as geology, geophysics, paleontology, and climatology. All those names added to the book's apparent authority. In each book section, Hapgood dropped more names, reviewed an enormous amount of anomalous geological evidence, and tried to explain it using the new theory of crustal shift driven by centrifugal forces.



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Hapgood also had excellent political connections. He got Einstein himself to write a forward to the book that added yet more credibility. Einstein played along with the hoax and pretended that the imaginary centrifugal force was real and capable of spinning the polar regions down to the equator. (*Slowly*, of course. Nothing to see here but a very authoritative book. Move along now, ...)

When the hoax was complete, Hapgood's book explained that the Earth's rotation generated a centrifugal force that acted on the heavy polar ice caps. If there was a layer of molten magma below the crust, then the centrifugal force could spin the ice caps down to the equator. But *slowly, very slowly*. Over many thousands of years. Then they could say to the public, "Nothing to worry about here. It won't happen for thousands of years. Don't worry, move along now..."

Besides, with enough pages in Hapgood's fat book and with enough handwaving, vagueness, and some obscure, confusing, and incomplete mathematics, most of the public wouldn't bother to look too closely. They would just accept the hoax, especially if Einstein himself blessed the hoax by writing a foreword for the book.

Since the time of the military *Project Nanook* in the late 1940s, four books have mentioned or advocated crustal shift theories as the mechanism to carry out catastrophes and generate the floods, volcanos, and earthquakes that destroy the world over and over again.

More than 75 years have passed since *Project Nanook*, and the crustal shift theory is alive and well. For example, Davidson's recent 2021 book on catastrophism, *The Next End of the World* (Davidson2021-1), used the imaginary centrifugal force and a crustal shift as the agent for the upcoming catastrophe expected between 2030 and 2050, according to the current estimates.

The main problem with the crustal shift theories is that none of the books or authors made any attempt to seriously *engage* with the simple physics of shifting the entire crustal shell of Earth. The required physics and math are so simple that any competent first-year university physics student could prove the theories invalid within an hour. Only simple math skills are required. The theories are *obviously* invalid because they break many known laws of physics and nature.

This raises an interesting question about why Einstein played along with the hoax in the foreword to Hapgood's book. Why would he do that? Surely, Einstein was enough of a physicist to know that the centrifugal force was imaginary. What was he thinking? Why did he do what he did?

Would you rather believe that 1) Einstein did not understand first-year university physics and the known laws of physics and nature or that 2) he deliberately played along with Hapgood's hoax at the request of the CIA? I think he played along with the hoax. I can't believe he could be stupid enough to believe in an *imaginary* centrifugal force.

The purpose of this book is to show why all four crustal theories are invalid—even if Einstein played along with the hoax in the 1950s and pretended that the imaginary centrifugal force was real.



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Introduction to Catastrophism

Catastrophism is the idea that the Earth and human and animal populations have enjoyed long periods of geologic tranquility in the past, punctuated by sudden catastrophic events that wrought havoc and destruction on the land and animals of the planet. The violent events include massive floods, volcanic eruptions, earthquakes, meteorite impacts, and large-scale storms and climate effects. With modern science to help understand them, the list of catastrophic events also now includes large-scale magnetic and electrical events that are triggered by solar flares and coronal mass ejections.

Typically, human civilizations and animal populations are severely affected or destroyed by large-scale catastrophic events. There is an enormous amount of geological, fossil, written, and oral history evidence that attests to past catastrophic events.

Uniformitarianism. In contrast, the theory of uniformitarianism maintains that only gradual and continuous processes over thousands or millions of years have affected Earth's geology, animals, and human civilizations. Uniformitarianism says that everyone should remain calm and that nothing disastrous is going to happen soon. "Move along," it says, "there is nothing to see here ..."

The Problem to Solve. The main problem that catastrophism tries to solve is how to explain the anomalies in the geological record and reconcile them with human historical records. For example, geological anomalies include the presence of marine fossils on mountaintops, evidence of glaciers in tropical regions, evidence of tropical tree fossils in polar regions, and the discovery of different types of rocks and minerals far from their expected locations.

The Origin of Catastrophism. The origin of catastrophism can be traced back to ancient and medieval times when natural disasters were often seen as divine punishments or signs of the end of the world. However, the modern version of catastrophism emerged in the 1600s and 1700s, when some naturalists and theologians tried to explain the anomalies in the geological record in terms of biblical events, such as the six days of creation and Noah's flood. All of that happened long before Velikovsky's shocking 1950 book of ancient eyewitness accounts.

Hundreds of years have passed since the origin of catastrophism, but humanity still doesn't have any good theory that can explain the anomalies in the geological record. All that can be said is that any good future theory should include water and floods as the major soldiers of geographic change. That's because water can sweep across continents, carry erratic boulders across valleys and up mountain slopes, carve channels in the land, and form glaciers in various regions of the world.

The Theory of Polar Shift. The theory of polar shift attempts to explain the geological anomalies by moving the polar regions to the tropics and back in recurrent cycles. However, the proponents of this theory had a problem – they couldn't create a reasonable explanation for *how* to move the polar



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regions to the equator. They could not identify any force of nature that was strong enough to tilt the entire planet – the energy requirements were too high.

The Theory of Crustal Shift. The earliest published mention of crustal shift seems to have originated with the U.S. military (or its contractors) during the late 1940s or early 1950s. The story is complicated by the publication of the details 40 years after the original mention of the theory.

In the 1940s, the U.S. military ran *Project Nanook* in Alaska from June 1946 to August 1948 with the goal of improving polar navigation techniques in Canada and Alaska. The project was managed by Major Maynard White. As part of their navigation work, the *Nanook* team discovered that the magnetic North Pole had moved northward much farther and faster than expected.

Because magnetic pole excursions and flips had been associated with catastrophes in the past, the military hired the RAND Corporation to do some lab experiments. The lab results said that the North magnetic pole would flip to the equator and “take the magnetized crust of the Earth with it.” That was the first mention of the crustal shift theory that used the magnetic force as the motive force for the shift.

In 1993, Maynard’s son, Ken White, published the story of the project in *World in Peril* (White1994) after the death of his father. One short chapter (8 pages) at the back of his book discussed *The Flip of the Earth* and mentioned the magnetic-driven crustal shift theory of the lab researchers. Although multiple pole excursions were mentioned, no mention was made of periodic or recurrent crustal shifts over time.

In 1959, ten years after *Project Nanook*, Hapgood published his book *Earth’s Shifting Crust* (Hapgood1958). He proposed that it wasn’t necessary to tilt the entire planet to move the polar regions to the equator and back. Instead, only the crustal shell of Earth could be shifted, which would require less energy. Hapgood’s co-author, Campbell, proposed that the imaginary centrifugal force could rotate the entire crustal shell by acting on the continental ice caps to spin them down to the equator. This was the first published theory that used the imaginary centrifugal force as the motive force for the shift. And the imaginary centrifugal force is still being used today by Davidson, more than 60 years later.

In 1963, a few years after Hapgood published his book in 1958, Chan Thomas published the first edition of his book *The Adam and Eve Story: A History of Cataclysms* (Thomas1963). The book was partially censored by the CIA and did not become fully available until 1993. The book focused mostly on past legends, floods, and biblical writings that supported six *recurrent* catastrophes that were spaced 4,550 to 14,750 years apart over the past 44,000 years. The whole book was focused on providing evidence and theories for recurrent catastrophes. Notably, Thomas was the first to publish an *end-to-end* theory for *recurrent* catastrophes that included a source, a trigger, a mechanism, and the consequences of a shift. He used a crustal shift driven by the imaginary centrifugal force as the mechanism to carry out recurrent catastrophes.



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In 2021, Davidson published his book *The Next End of the World* (Davidson2021-1). Davidson's theory shared the same basic structure used by Thomas, including a galactic source, a molten layer trigger under the crust, a crustal shift driven by the imaginary centrifugal force, and similar resulting consequences. However, Davidson's theory includes substantially more—and new—types of evidence for catastrophes than any previously published theory.

Specifically, Davidson's theory included many decades of additional modern geological, solar, and cosmic evidence that go far beyond what Thomas used in his 1963 book. In addition, Davidson's theory refined the source to be our solar system crossing the galactic current sheet instead of crossing the galactic plane and added a solar micronova of our Sun as part of the mechanism. The micronova would “unlock” (melt) the layer below the crust, Davidson says, and would thereby permit the crustal shift to occur with lower friction.

To get a fast overview of the most modern theory of catastrophism, you can watch the 16-minute YouTube video [Earth Disaster is Coming | All the Evidence](#) by Davidson.

This completes the introduction to catastrophism. In what follows, this book will show that all four crustal shift theories are invalid because they violate multiple known laws of physics and nature.

Four Books on Crustal Shifts

There is no doubt that periodic catastrophes have occurred on Earth. The recent geological record and ancient cultural stories provide an overwhelming amount of evidence for major cataclysms about 12,000 years apart, with some smaller events on the half-cycle intervals of 6,000 years.

The geological evidence seems to demand that the polar regions “wandered” around the planet to explain the strange evidence of glaciers in the tropics, tropical tree fossils in the polar regions, marine fossils found thousands of feet up in the mountains, and many other strange findings that are inconsistent with stable polar regions.

What else but polar wanders to the equator and back could explain all those anomalies?

Flipping the Planet or Shifting the Crust

There's a big difference between *flipping the whole planet* and *shifting the crust alone*. Flipping the whole planet requires changing the orientation of Earth's rotational axis in space, whereas shifting the crust leaves the rotational axis alone. The core of the planet keeps rotating as normal.

The next four theories describe shifting the crust 90 degrees to put the poles at the equator without disturbing the core rotational axis of Earth in space.



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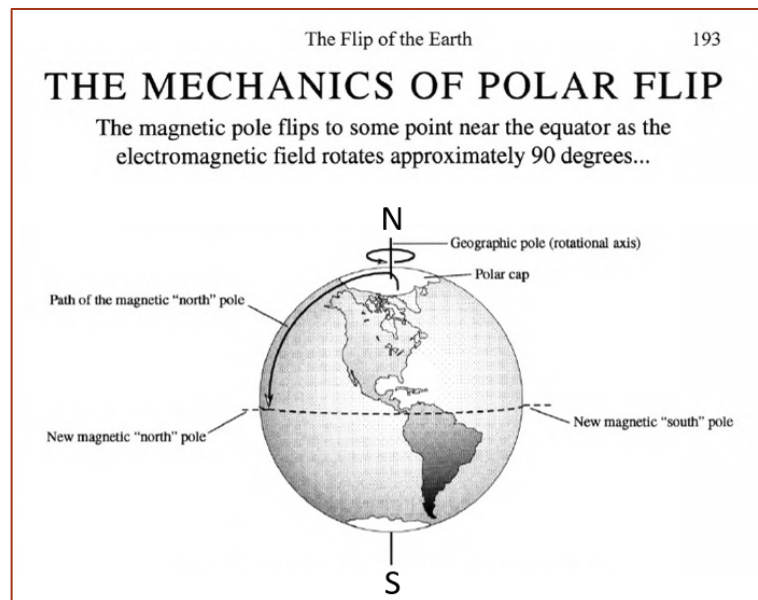
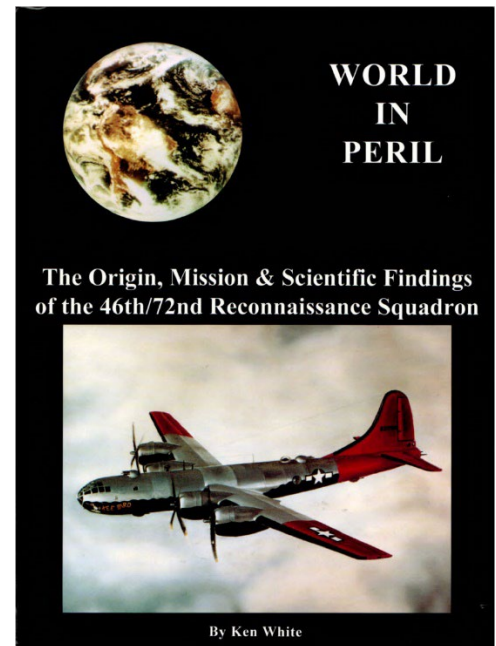
Book: *World in Peril* – by White

Ken White's 1994 book (White1994) concentrated on *Project Nanook*, the military project that his father, Major Maynard White, USAF, managed from 1946 to 1948 in Alaska. Because the work was done in the 1940s, White's book has been placed first in order here.

Only three chapters (about 6%) in White's book briefly discuss *crustal shifts* and cataclysms based on past geologic evidence and a key piece of new evidence that his father's team found during their northern explorations in the 1940s. The magnetic north pole had moved an unexpected distance (125-200 miles) in an unexpectedly short time. Naturally, the Pentagon classified the information.

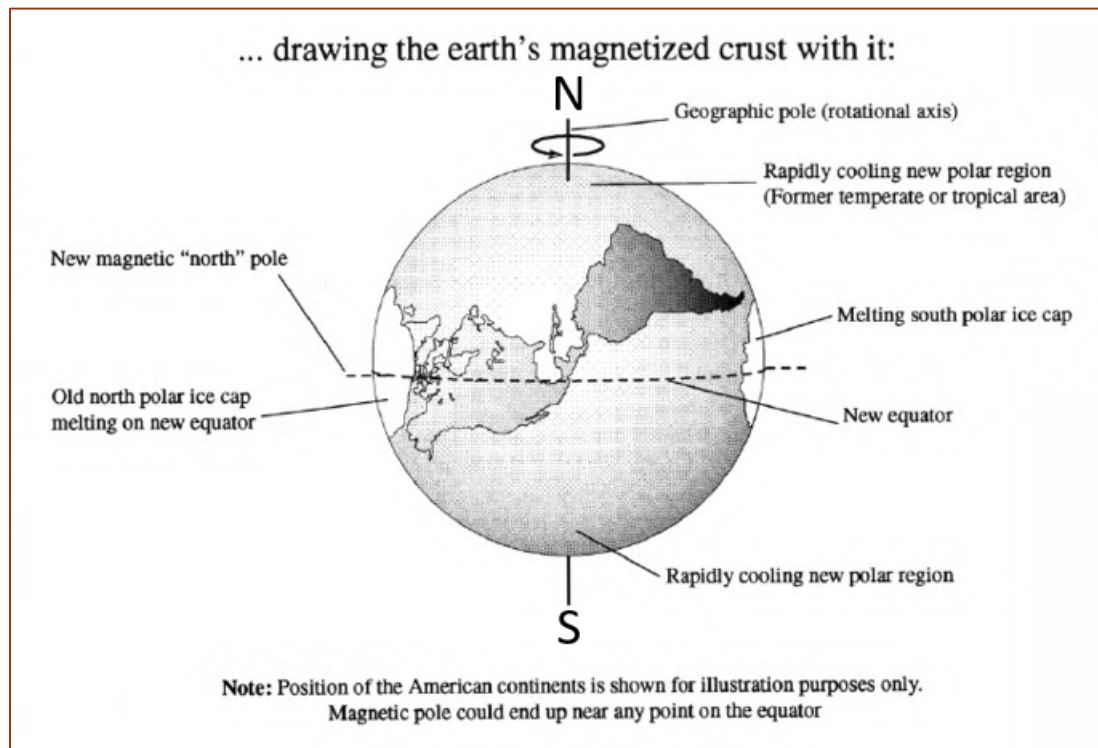
The Pentagon then hired RAND corporation to do some lab experiments to find out more about magnetic pole excursions and crustal shifts. The experiment suggested that the "polar flip" of the Earth's magnetic field might be the motive force for the event. Based on the experimental results, White wrote, "The magnetic pole flips to some point near the equator as the electromagnetic field rotates approximately 90°, drawing the Earth's magnetized crust with it." See the images below for the position of the polar ice caps before and after the magnetic flip. The original vertical rotational axis of the Earth does not change in the pictures – only the crust shifts to move the polar ice caps to their new location.

The military theory described by White did not call for the liquification of the layer below the crust (the asthenosphere). Instead, White wrote that the induction caused by the radical and rapid rotation of the earth's magnetic field might "impel" the crust to break from the asthenosphere and follow the magnetic poles. White's book did not provide any calculations to estimate the masses, directional movements, or motive or frictional forces involved.





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For convenience, the image shows the north polar ice cap moving from the 12 o'clock position to the 9 o'clock position, which is a simple 90-degree rotation counterclockwise in the plane of the paper. However, the actual travel path of the north polar ice cap would necessarily be a spiral from the North Pole down to the equator because the Earth would still be rotating as the shift happened. After the shift, both ice caps would be circling around the equator as Central America once did.

White also cited the evidence of a frozen Alaskan mammoth found with undigested food in its stomach as a clue that perhaps the magnetic flip and crustal shift might occur in a short time (one day?) if it killed and froze a large mammoth before it could digest fresh food in its teeth and stomach.

Keep in mind that White's book was about *Project Nanook*. It was never supposed to be a book about magnetic pole excursions, polar region wanders, or crustal shifts. White only incidentally reported in a few chapters at the back of his book on the history of magnetic pole shifts and on what the military contractor RAND said about a possible polar flip and crustal shift in the future.

Thus, White's book is not a main part of the Great Crustal Shift Hoax of Catastrophism. It was only a sideline book that touched on the topic (and even then, someone else wrote one of the short chapters related to the topic at the end of the book).



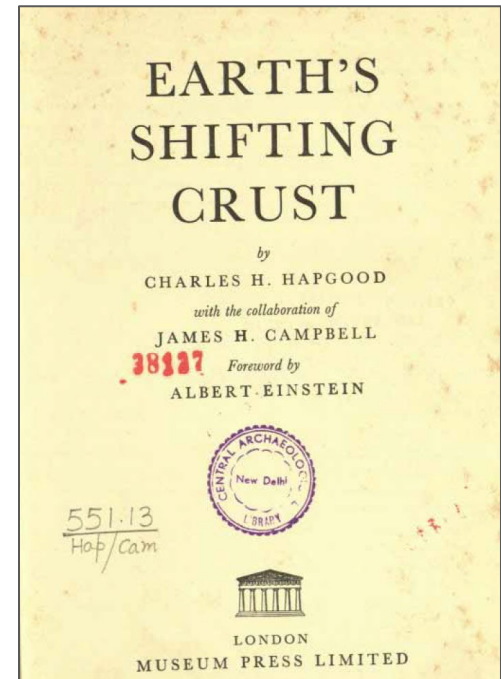
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Book: *Earth's Shifting Crust* – by Hapgood

Hapgood's 1958 book (Hapgood1958) contained a large amount of evidence from the geological record and focused on how his new theory of *crustal displacement* could explain that evidence. Most of Hapgood's 457-page book was devoted to discussions of various kinds of geological evidence and how *crustal displacements* might explain the geological anomalies.

Hapgood's theory was that unbalanced centrifugal forces acting on the continental ice glaciers in Greenland and Antarctica would create enough force to slowly displace the Earth's crustal shell (the lithosphere) over thousands of years to move the polar regions to the equator.

Over time, new polar ice caps would build up at the new poles and create new unbalanced centrifugal forces that would drive the next *recurrent* crustal displacement event. Hapgood suggested that the durations of the displacements could take as little as 5,000 years, which is fast in geological time.



In the last chapter of his book, Hapgood provided some obscure calculations done by James H. Campbell to estimate the movements and centrifugal forces required by the theory. Hapgood was careful to distance himself from the calculations and credited Campbell with all the work.

Hapgood listed two key assumptions of his theory. First, the continental ice caps were uncompensated (unbalanced) isostatically so they could generate sufficient centrifugal force. And second, the layer below the lithosphere would permit the crust to move over it (p358).

Einstein wrote the foreword to Hapgood's book and played along with the hoax of the imaginary centrifugal force. He also hinted at some possible changes in the rotational axis of Earth.

Davidson (Davidson2021-1) wrote about Hapgood: "At the time, there was no CIA, but its predecessor organization (the Office of Strategic Services - OSS) was key at the Pentagon meetings, and Charles Hapgood was on the roster."

Military and CIA connections were popular in books about crustal shift theories. For example, the Pentagon classified the findings by Project Nanook about a magnetic pole flip and crustal shift. Hapgood worked for the OSS/Pentagon. And the next author, Thomas, was no different. He also had connections to the CIA, and an early version of his book was classified in the 1960s.



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Book: *The Adam and Eve Story* – by Thomas

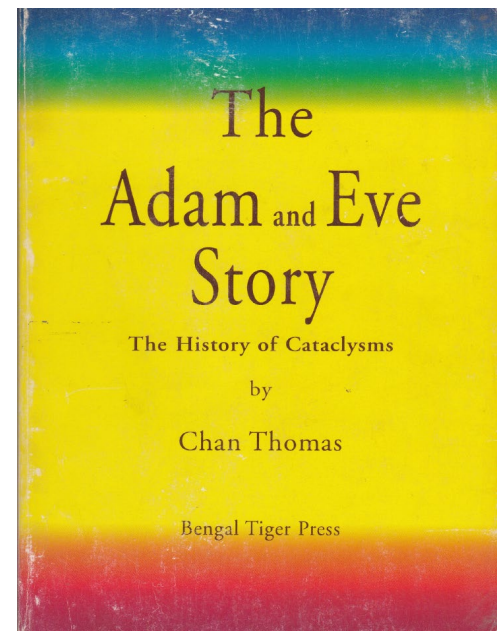
Thomas' 1965 book (Thomas1963) was partially censored by the CIA, and the full version did not become fully available until 1993. The full title of the book was *The Adam and Eve Story: The History of Cataclysms*. The book focused mostly on past legends, floods, and biblical writings that supported six *recurrent* cataclysms 4,550 to 14,750 years apart over the past 44,000 years. The whole book was focused on explaining the recurrent catastrophes.

Thomas called for *recurrent* catastrophes that would reset the world with a new cataclysm every 4-14 thousand years. Part of the book was immediately classified by the CIA, and Thomas had a difficult time making his ideas visible to the public through lectures and television programs.

Thomas used Hapgood's theory of unbalanced imaginary centrifugal forces acting on the continental ice caps as the mechanism to carry out the cataclysm. Thomas also went further and explained *why* the asthenosphere would allow the shift. He added the new concept that the molten asthenosphere would be made liquid by the collapse of the Earth's magnetic field whenever our solar system moved through a magnetic null spot within the Milky Way galaxy. By doing this, Thomas explained what the *trigger* was for the cataclysm.

Finally, Thomas suggested that the *duration* of the cataclysm could be very fast – perhaps only 6 to 12 hours. He used another frozen mammoth anomaly (no time to digest food before the mammoth was frozen solid) to justify his short timeline and explained that the mammoth meat must have been frozen within hours because it was still good to eat after tens of thousands of years.

Thomas, like all the other authors, did not provide any clear calculations whatsoever to estimate the masses, directional movements, or motive or frictional forces involved. Any competent first-year physics student could easily do the simplistic math and prove the theories to be ridiculous. (The simple math calculations are included later in this book.)





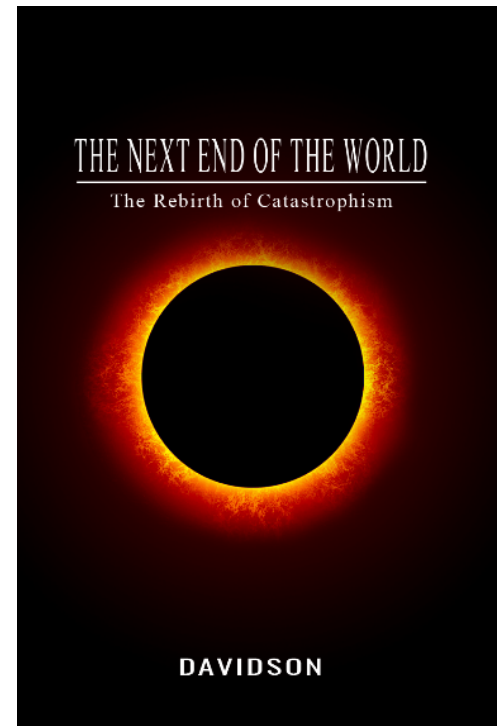
THE GREAT CRUSTAL SHIFT HOAX

Book: The Next End of the World – by Davidson

Davidson's 2021 book (Davidson2021-1) is the fourth book on catastrophism discussed in this book. It is unique because it used both past geological evidence and new solar and stellar evidence to support and explain the future cataclysm that is *currently in progress* at the time of this writing.

Davidson's comprehensive theory outlines the following sequence of events in a catastrophe:

- our solar system crosses the galactic current sheet (the *source* of the event),
- and enters a new region of reversed polarities,
- which causes a micronova of the Sun (the *trigger* for the event),
- which generates enough energy to liquefy the asthenosphere layer under the crust,
- which enables the *imaginary* centrifugal force to rotate the crustal shell (the *mechanism*),
- which moves the polar regions to the equator rapidly (to generate geological *consequences*)
- in about a single day (the *duration* of the event),
- all repeated on a 12,000-year recurrent cycle (the frequency of the cycle).



Davidson provided no calculations whatsoever to estimate the masses, directional movements, or motive or frictional forces involved in the crustal shift. Like all the other authors, he didn't do his simple mathematical homework and deliberately avoided telling the truth.

Summary of the Books on Crustal Shift

There is no doubt that periodic catastrophes happen on Earth. The geologic record and ancient cultural stories provide good evidence for cataclysms that can be convincingly organized into approximately 12,000-year intervals.

For example, Davidson's book provided the following table of magnetic pole excursions and catastrophes every 12,000 years for the past 115,000 years. Smaller minor cataclysms can sometimes occur in half cycles of 6,000 years, such as Noah's flood.



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Excursion Name	Estimate Time	Biosphere Impact /10
Gothenburg	~12,000 years ago	8/10 (Severe)
Lake Mungo	24 - 28,000 years ago	4/10
Mono Lake	33 - 37,000 years ago	5/10
Laschamp	41 - 46,000 years ago	8/10 (Severe)
Vostok/Greenland	~60,000 years ago	5/10
Toba	~72,000 years ago	9/10 (Extreme)
???	~84,000 years ago	<4/10
???	~96,000 years ago	<4/10
Blake	105-115,000 years ago	8/10 (Severe)

Furthermore, the geologic evidence seems to demand that the polar regions “wander” around the planet to explain the strange evidence of glaciers in the tropics, tropical tree fossils in the polar regions, and many other strange findings that seem inconsistent with stable polar regions over time.

All four books discuss the past catastrophes in recent geological history (reaching back to 120,000 years ago on a 12,000-year cycle).

- White’s book used a magnetic pole flip to “impel” the magnetized crust to move to the equator and back in recurrent cycles. His theory did not require a liquified asthenosphere.
- Hapgood used the imaginary centrifugal force acting on the continental ice caps to carry out *crustal displacements*. His theory assumed centrifugal forces and a permissive asthenosphere.
- Thomas’ book also used the imaginary centrifugal force to move the ice caps after our solar system crossed a magnetic null spot in the galaxy. The null spot caused the Earth’s magnetic field to collapse and liquify the asthenosphere layer under the crust to permit the shift to occur.
- Davidson’s book used a crossing of the galactic current sheet by our solar system to trigger a micronova of our Sun that would “unlock” (melt) the layer below the crust. This would enable the imaginary centrifugal force acting on the ice caps to move the polar regions to the equator and back every 12,000 years. His book used magnetic pole movements as indicators of progress into the cataclysm that is currently underway.

Now that all the theories have been introduced, we can evaluate them more carefully in the following chapters. The evaluation will show that all the crustal shift theories above are invalid because they violate the known laws of physics and nature.



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How to Evaluate the Theories

How can the crustal shift theories be evaluated? What would be reasonable to expect from the descriptions of such theories? This section describes the evaluation criteria used by this book.

A Good First-Year Assignment for First-Year Physics Students

Evaluating the crustal shift hoax would be a very interesting and educational experience for first-year physics students. It would teach them how to use the known laws of physics and the universe to evaluate and debunk theories put forth by authors who deliberately avoided doing their homework and telling the truth about crustal shifts.

For example, one of my university teachers asked us each week to hand in a one-page essay on what we learned that week and how the principles could affect our real-world existence. This book is much longer than a one-page essay. But my hope is that by showing all the details of my homework, I can make it easier for people to see that they don't have to be afraid of a crustal shift that will never happen, as the false authors claim.

My feeling is that the authors of the four books reviewed here should easily have been able to do the simple add, subtract, multiply, and divide calculations to show that a crustal shift that moves the Earth's crust 90 degrees (pole to equator) in less than 24 hours is a complete and utter hoax.

Do you *really* believe that imaginary forces can accelerate, rotate, and decelerate the shell of the Earth's crust at **speeds faster than the fastest Learjet (500+ MPH)**? "Complete nonsense," my physics teacher might say as he smiled and laughed at the idea.

It is also astonishing that Einstein was part of the original hoax. He wrote a foreword for Hapgood's book. Here is a quote from Einstein's foreword.

In a polar region, there is continual deposition of ice, which is not symmetrically distributed about the pole. The Earth's rotation acts on these unsymmetrically deposited masses and produces centrifugal momentum that is transmitted to the rigid crust of the Earth. The constantly increasing centrifugal momentum produced in this way will, when it has reached a certain point, produce a movement of the Earth's crust over the rest of the Earth's body, and this will displace the polar regions toward the equator.

It makes no sense that Einstein, supposedly the great physicist, would not understand the known laws of the universe and first-year physics. He would certainly have known that the *imaginary* centrifugal force was just that – *imaginary*. Therefore, I conclude that he was part of the hoax when he wrote the foreword in Hapgood's 1958 book and spoke like the centrifugal force was real.



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General Criteria for New Theory Explanations

In general, new theories can be evaluated using many different criteria. The choice of criteria is up to the evaluator, and there is no single “correct” answer for choosing the set of criteria.

The general criteria for evaluating theories of all kinds are mostly concerned with clear explanations and specific statements of the boundaries, claims, and assumptions of the theory. It is also helpful if the theory has internal self-consistency. Where appropriate, the presence of numerical calculations can support the theory by helping others to understand how the theory works.

For example, here are some general criteria that could be used to evaluate theories of many kinds.

Clarity. The explanation of the theory should be clear in all aspects. There should be no hiding, handwaving, vagueness, or extra complexities that obscure information from readers.

Scope. The theory should specify the boundaries of the theory and the problems it addresses.

Claims. The theory should be clear about what it claims.

Assumptions. The theory should be clear about what it assumes.

Completeness. The theory should address all major questions about the theory and topic.

Numerical Estimates. The theory should provide approximate numerical estimates where possible.

Consistency. The theory should be logically consistent within itself, with all its parts fitting together in a way that makes sense and that can be explained to others.

Reasonableness. The theory should not contradict established facts and laws of nature and physics. It is important to be careful with this criterion because new theories can sometimes challenge older, accepted understandings.

Falsifiability. Ideally, it should be possible to prove the theory false if it is incorrect. This is a difficult criterion because falsifiability tests about future events (like a crustal shift) cannot be carried out until the future arrives. Fortunately, crustal shift theories can be proven false by first-year physics students because crustal shifts violate at least half a dozen of the known laws of the universe.

Testability. The theory should be testable through empirical evidence and experiments. This criterion is also difficult because complex theories about future events cannot be tested beforehand.

You might be able to think of additional criteria that are not in the general list above. Your list of favorite criteria would probably be different than the specific list of evaluation criteria that I chose for this book. I show and explain all my decisions and my homework in the pages that follow.



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General Criteria for Crustal Shift Theories

Here are the general criteria that I chose to use in this book. Score 1 point when the theory gives any reasonable description or discussion related to a single criterion.

- 1, Show clarity to avoid handwaving explanations of key ideas.
- 1, Specify the scope to define the boundaries of the theory.
- 1, Specify the claims to be clear about the written claims of the theory.
- 1, Specify the assumptions to show what the theory is based on.
- 1, Show completeness to avoid superficial explanations that omit key topics.
- **5 = the maximum possible score for this category.**

Specific Criteria for Crustal Shift Theories

It is also helpful to identify specific evaluation criteria for crustal shift theories. These specific criteria are concerned with the key questions that all crustal shift theories should answer. For example, Thomas included several of these questions in his own explanation of crustal shift. Each crustal shift theory should address all of the following major issues.

Score 1 point for any reasonable discussion of the criterion or issue.

- 1, Specify the source for the event (what starts the event, recurrently if appropriate).
- 1, Specify the trigger for the event (what is the final trigger).
- 1, Specify the process for the event (what happens - planet flip or crustal slip).
- 1, Specify the motive force for the event (magnetic field, centrifugal force, or both).
- 1, Specify the duration of the event (6 hours, 12 hours, 24 hours, or 5000 years).
- 1, Specify the speed of motion (of planet flip or crustal shift, peak, and average MPH).
- 1, Specify the recurrent frequency of the event (does the event recur, and if so, how often).
- 1, Specify numerical calculations (for sizes, masses, forces, directions, and speeds of the event).
- 1, Specify how the electrical force operates in the event.
- 1, Specify how the magnetic force operates in the event.
- 1, Specify how the gravitational force operates in the event.
- 1, Specify how the frictional force operates in the event.
- **12 = the maximum possible score for this category.**

Criteria List for the Known Laws of Physics and Nature

I once asked my teacher about why some principles were called Laws while others were called Theorems or Principles. Why the difference? What made one principle a Law? The class went silent, and my teacher looked at me carefully and said, “A Law is a fundamental, very important principle



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that has never failed to be true throughout human history.” Laws are extremely useful because they are inviolate principles that other principles and theories can be built upon.

So, when you read the phrase “the known laws of physics and nature” in this book, I refer to the set of laws of physics and nature that have never been disproved in all human history. They are rooted in the most fundamental behaviors of the universe that we live in. Examples include the Law of Gravity, the Law of Conservation of Energy, the Law of Conservation of Angular Momentum, and Newton’s three Laws of Motion. All these laws have been taught to first-year physics students for more than 100 years. (But as you will see, the crustal shift authors deliberately avoided them.)

Here is a list of evaluation criteria used by this book for the known laws of physics and nature. Each violation has been given an arbitrary score of -20 to reflect the seriousness of violating the known laws of physics and nature. The score of -20 was chosen so that theories that violated the known laws of the universe would end up with a total negative score. (In other words, the negative -20 score of violating even a single known law of the universe would cause the final score to be negative and easily recognized. Theories that stay within the known laws of the universe are given a score of zero.

- -20, The theory violates one or more of Newton's Laws of Motion.
- -20, The theory violates the Law of Conservation of Angular Momentum.
- -20, The theory violates the characteristics of the motive field forces in nature.
- -20, The theory ignores the Law of Gravity and the behavior of gravitational forces in nature.
- -20, The theory ignores the frictional force of nature.
- -20, The theory misunderstands the behavior of rotational axes in free space.
- **-120 = the minimum possible score for this category.**

The maximum score for a theory is $5 + 12 + 0 = 17$. The minimum possible score is $0 + 0 - 120 = -120$.

If a theory violates any laws of nature, it will have a negative overall score.

Summary

The paragraphs above define the evaluation criteria used in this book. Three categories of criteria were defined: 1) general criteria, 2) specific criteria for crustal shift theories, and 3) violations of the laws of physics and nature.

General Criteria. The first category described general criteria for the *written expression* of a crustal shift theory. For example, Was the description of the theory clear, or did it contain some hand-waving vagueness? Was it internally consistent? And so on.

Specific Criteria. The second category of specific criteria was concerned with *the specific issues of crustal shift theories*. Did the theory describe the trigger, preconditions, forces, masses, motions, directions, accelerations, and timings of the proposed crustal shift?



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The Laws of Physics and Nature. The third category of criteria was concerned with the laws of physics and nature. Did the forces and motions described by the theory agree with or violate the known laws of physics and nature?

The next chapter explains some of the known laws of physics and nature in the criteria list above.

Claims That Violate the Known Laws of Physics

Any theory that violates a known law of physics or nature is invalid. Otherwise, the violating theory should specify the known law of physics or nature and prove it to be false.

Because the known laws of physics and nature are so important, the following paragraphs give examples of how the known laws of physics can be violated by the four crustal shift theories.

Newton's Laws of Motion

Newton's First Law. *A body remains at rest or in motion at a constant speed in a straight line unless acted upon by an external force.*

This law states that the crust will not shift unless a force acts upon it. Thus, the theories must explain exactly 1) what force, 2) will grip the crust (and how the grip will be carried out), and 3) in which directions and speeds the force will move the crust during the entire event.

Newton's Second Law. *The change of motion of an object is proportional to the force used.* The change in motion is made in the direction of the straight line in which the force acts on the object. By "motion," Newton meant *momentum*, which depends upon the mass of a body, the speed at which that body is moving, and the direction in which it is moving.

In the case of crustal shifts, this law says that the motive force that shifts the crust must always act perpendicular to gravity and tangential to the surface of the crust. In other words, the force must be *rotational* itself because it must always rotate with the crust as the Earth rotates 1) throughout the day and 2) throughout the shifting motion from pole to equator. Notice that this requires the motive force to rotate in two dimensions simultaneously during the event (from pole to equator to consistently point to the equator and from longitude 0 to 360 to move with the Earth's rotation).

If a theory claims that the layer beneath the crust is frictionless (or nearly so), then Newton's Second Law requires the motive force to first accelerate the crust from zero to peak speed on the way to the equator and then reverse direction to decelerate the crust so that it stops near the equator.

On the other hand, if a theory claims that the layer beneath the crust is NOT frictionless (or nearly so), then Newton's Second Law requires the theory to estimate the strength of both the motive force



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and the frictional force and show exactly when the motive force is greater than the frictional force. Otherwise, if the motive force is less than the frictional force, the crust will not move at all.

The Law of Conservation of Angular Momentum

The Law of Conservation of Angular Momentum. In a closed system of bodies, no torque can be exerted on any body or matter without the exertion on some other body or matter of an equal and opposite torque about the same axis. Hence, *the total angular momentum before and after an exchange is conserved and remains constant.*

In the case of crustal shifts, this law states that if *the pole on the **crust*** is accelerated in one direction (say, from the North Pole to the equator), then *the pole of the **core*** below the crust must accelerate in the equal and opposite direction. Similarly, if the *pole on the crust* decelerates as it approaches the equator, the *pole of the core* must also decelerate in an equal and opposite direction.

To be precise, the pole of the core would not move the same distance (all the way to the equator) as the pole of the crust would because the core has much more mass than the thin crust. Heavier bodies with more mass don't have to move as far as lighter bodies to keep the angular momentum balanced.

If a theory calls for shifting the poles on the crust without shifting the poles of the core, then the theory violates the Law of Conservation of Angular Momentum and is invalid.

Characteristics of the Motive Force

The motive forces described by a theory must not conflict with the known characteristics of forces in nature. For example, both the electric and magnetic *field* forces are radial and continuous.

If a theory (in White's book) calls for a magnetic *field* force to push the crust one way and push the core the other way, right at the boundary between the crust and the asthenosphere, then the theory would be describing a split magnetic force that does not exist in nature. It is impossible to have a *field* force reverse polarity or direction at a particular radius from the origin of the force.

Similarly, if a theory called for an *imaginary* centrifugal force to push the crust one way and the core the other way to conserve angular momentum, then the theory would be invalid because the imaginary centrifugal force pushes in only one direction. It cannot push in two opposing directions at the same time. More details about the imaginary centrifugal force are provided later.



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Ignoring the Gravitational Force

The gravitational force pulls objects directly toward the center of mass of the Earth. But for convenience, the gravitational force can be split into two forces (at right angles to each other) that point in different directions of interest. The first direction of interest is perpendicular to the rotational axis of Earth. This is the real gravitational force component that pulls ice caps, lands, oceans, and everything else inward toward the rotational axis of Earth. The second component of the gravitational force is parallel to the rotational axis and is the real force component that pulls the crust toward the equator (or, more properly stated, toward the equatorial plane that runs through the center of the Earth).

In the case of crustal shifts, a theory that uses an imaginary centrifugal force component to push the crust *outward*, away from the rotational axis, is invalid because it uses an *imaginary* force to overcome the *real* gravitational force that pulls the crust *inward* toward the rotational axis.

If the theory does not mention the gravitational force, then the theory is drastically incomplete and also invalid.

Ignoring the Frictional Force

The frictional force of nature resists the differential motion between two objects that share a common surface area of contact. Friction is why we use oil between machine parts – to reduce the frictional force that resists the desired motion. The strength of the frictional force depends on the “normal” force (at right angles to the shared surface) that presses the two surfaces together. That’s why heavier trucks have more “traction” (friction) than lighter vehicles. Gravity operating on the heavier trucks presses the tires into the road with more “normal” (at right angles) force.

In the case of crustal shifts, a theory that ignores the *enormous* frictional force between the crust, the underlying layer (the asthenosphere), and the mantle (underneath the asthenosphere) is drastically incomplete and also invalid. Any theory that ignores the force of friction and claims that the asthenosphere is frictionless (or nearly so) violates the known laws of nature and is invalid.

Misunderstanding Rotational Axes in Free Space

A rotating body (or system of bodies) in free space is *always* in balance around its rotational axis because the rotational axis is derived from the position and movements of the masses in the system. The rotational axis of a collection of bodies realigns itself instantaneously to keep the masses around the axis in perfect balance. You can calculate the rotational axis for any set of bodies if you know the motions of the masses in the system. This is a common exercise in first-year physics courses.



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In the case of crustal shifts, the crust cannot shift in one direction without also shifting the core an equal and opposite amount in the opposite direction. If a theory claims to shift the crust (changing the rotational axis of the crust) while keeping the original rotational axis of the core unchanged, then the theory violates both the Law of Conservation of Angular Momentum and other laws of nature (the laws of rotational axes in free space) and is invalid.

For convenience, the next chapter summarizes the four theories and their characteristics in a tabular format. After that, each theory will be evaluated individually using the three categories of evaluation criteria.



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Tables of Theories and Evaluation Criteria

The following tables summarize the four theories in convenient tabular form. You can use the tables to get an overview of the theories, their key elements, and their eventual evaluation outcomes.

Table of Books in This Study

This table summarizes general information about the four books and theories evaluated in this book.

	White	Hapgood	Thomas	Davidson
Title	World in Peril, 1948/1994	Earth's Shifting Crust, 1958	The Adam and Eve Story, 1993	The Next End of the World, 2021
CIA/Military connections	Yes	Yes	Yes	No
Content date / published date	1940s/1994 posthumous, Pentagon censored in 1940s	1950s/1958	1950/1963 1 st Ed, CIA partially censored. 1993 latest Ed.	2021/2021 no delays
Major focus	<i>Project Nanook</i> polar navigation military project	Geologic evidence explained by new crustal shift theory, Campbell's calculations	Geologic, biblical, and legendary evidence for recurrent cataclysms	Past and present evidence for cataclysms, new theory with solar micronova
Mechanism	Crustal shift	Crustal shift	Crustal shift	Crustal shift
The force that liberates the crust	"Induction" impels the crust to break free, p191	Not specified; a permissive layer was assumed	Galactic null zone, p112, releases the asthenosphere	Solar micronova, melting effect on asthenosphere
The force that moves the crust	Magnetic pole flip "takes the crust with it" p197	Continental ice caps, centrifugal force, p13	Continental ice caps, centrifugal force, p18	Continental ice caps and centrifugal forces, p22, p25
The core spins as usual.	Yes	Yes	Yes	Yes, p25.
Duration of the shift	Possibly fast and suggested by an Alaskan frozen mammoth, p192	5,000 years (p286; White p189) – 20,000 years.	6 to 12 hours, p18	24 hours (video)



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Table of Theories and General Criteria

This table evaluates the four theories according to the general criteria defined above.

	White	Hapgood	Thomas	Davidson
Title	World in Peril, 1948/1994	Earth's Shifting Crust, 1959	The Adam and Eve Story, 1993	The Next End of the World, 2021
Clarity	Vague in many aspects about the motive force, grip, friction, etc.	Vague in many aspects about the imaginary motive force, friction, etc.	Vague in many aspects about the imaginary motive force, friction, etc.	Vague in many aspects about the imaginary motive force, friction, etc.
Scope	Crustal shift only	Crustal shift only	End-to-end theory	End-to-end theory
Claims	No clear claims	No clear claims	Trigger, unlocking mechanism, crustal shift by centrifugal force, duration, recurrent frequency	Trigger, unlocking mechanism, crustal shift by centrifugal force, duration, recurrent frequency
Assumptions	None stated	2 clearly stated	None stated	None stated
Complete	Missing: gravity, friction, speeds, mass, acceleration, calculations	Missing: gravity, friction, mass, acceleration, some calculations	Missing: gravity, friction, speeds, mass, accelerations, calculations	Missing: gravity, friction, speeds, mass, acceleration, calculations

Table of Theories and Specific Criteria

This table evaluates the four theories according to the Specific Criteria for crustal shifts.

	White	Hapgood	Thomas	Davidson
Title	World in Peril, 1948/1994	Earth's Shifting Crust, 1959	The Adam and Eve Story, 1993	The Next End of the World, 2021
Major event	Crustal shift	Crustal shift	Crustal shift	Crustal shift
Trigger	Not specified	Not specified	Sun crosses the galactic <i>equator</i> p112.	Sun crosses the galactic <i>current sheet</i> .
Crustal release	"Induction" impels the crust to break free, p191	Not specified; assumed a permissible layer	Liquification of the asthenosphere, p112	Solar micronova, melting effect on asthenosphere



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	White	Hapgood	Thomas	Davidson
Mechanism	Magnetic pole flip “takes the crust with it” p197	Continental ice caps, centrifugal force, p13	Continental ice caps, centrifugal force, p18	Continental ice caps, centrifugal forces, p22, p25
Change of rotational axis	No	No	No	No, p25
Duration	Possibly fast and suggested by an Alaskan frozen mammoth, p192	5-20,000 years	6 to 12 hours, p18	1 day (video)
Recurrent Frequency	Not specified	Not specified	4K to 14K years	12,000 years
Numerical Calculations	None	Very few – insubstantial	None	None

Table of Theories and Violations of Natural Laws

This table evaluates the four theories according to the laws of physics and nature.

	White	Hapgood	Thomas	Davidson
Title	World in Peril, 1948/1994	Earth’s Shifting Crust, 1959	The Adam and Eve Story, 1993	The Next End of the World, 2021
Newtons Laws	Violated	Violated	Violated	Violated
Conservation of Angular Momentum	Violated. The inner core continues to rotate normally.	Violated. The inner core continues to rotate normally.	Violated. The inner core continues to rotate normally.	Violated. The inner core continues to rotate normally.
Characteristics of Motive Forces	Violated. Force reversal and deceleration are not discussed.	Violated. Force reversal and deceleration are not discussed.	Violated. Force reversal and deceleration are not discussed.	Violated. Force reversal and deceleration are not discussed.
Ignored the gravitational force	Ignored	Ignored	Ignored	Ignored
Ignored the frictional force	Ignored	Ignored	Ignored	Ignored
Misunderstood rotational axes in free space	Yes. The inner core continues to rotate normally.	Yes. The inner core continues to rotate normally.	Yes, the inner core continues to rotate normally.	Yes. The inner core continues to rotate normally.



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The Laws of the Universe

This book includes three chapters to prepare readers for understanding the known laws of physics and nature. This first chapter of preparation introduces some of the basic laws of physics that the four theories violate.

The Four Real Forces of Nature

There are four natural forces known to physics. In order of their strength, the four forces are:

- The *strong nuclear force* that holds protons and neutrons together in an atom,
- The *weak nuclear force* is like the strong force but allows the radioactive decay of atoms,
- The *electromagnetic force* and
- The *gravitational force* (which is the weakest force of them all).

For example, the electromagnetic force is 10^{36} times stronger than the gravitational force. That is, the force is 10,000,000,000,000,000,000,000,000,000,000 times stronger than gravity.

The nuclear forces are even stronger, but they do not apply to this analysis.

The frictional force, although a real force in nature, does not exist until two surfaces are moved with respect to each other. Thus, it is not included in the list of natural forces above.

The Three Imaginary Forces Invented by Humans

The popular *centrifugal*, *centripetal*, and *Coriolis* forces **are imaginary forces and do not exist in nature**. Instead, they are *imaginary* forces that were invented by physicists to make it easier to explain the visible motions of objects when seen by an observer in a *rotating frame of reference*.

Three of the crustal shift theories are invalid because they depend heavily on the use of the *imaginary* centrifugal force. This means that the theories do not use real forces known to physics. As you will see, this is a major weakness that invalidates the same three theories.

Characteristics of the *Field* Forces of Nature

The gravitational and electromagnetic forces are intangible *field* forces that you cannot see. You can *feel* the gravitational force. You can also *feel* the electrical force if it is strong enough and you are close enough to it (think of the static electricity that makes your hair stand on end while touching a Van de Graff generator or when you stand on top of a mountain before an electrical storm).



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In contrast, you cannot normally *feel* magnetic forces because the human body is not magnetic.

The strength of a *field force* is proportional to the distance (radius) between the source of the field and the measurement point.

The Gravitational Field Force

The gravitational field force of Earth pulls everything within the field toward the center of mass of the planet. For example, it pulls down meteors from the sky, airplanes from the sky, and pulls humans down toward the ground (the crust of the Earth).

The gravitational force also pulls the Earth's crust down on the layer below the crust (the asthenosphere), pulls the asthenosphere down onto the mantle, and pulls the mantle down onto the core of the Earth. The gravitational field force pulls everything toward the center of the planet.

It is impossible for the gravitational force to rotate the crustal shell because gravity pulls directly and radially inward to the center of mass of the Earth. It exerts no tangential (sideways, rotational) force on the crust. See the marble-on-a-table and skateboarder examples below for fun examples.

The Electromagnetic Field Force

The electromagnetic field force acts like the gravitational force in many ways. For convenience, we can split the electromagnetic force into two pieces – the electric field force and the magnetic field force. In real life, the two are inseparable because they are both created by the same source – moving electrical charges. (We ignore the special case of permanent magnets because they are too small and do not apply to planetary-scale magnetic fields that could move the crust.)

Strength of the fields. The electric and magnetic field forces are *radial* fields that spread out from their point origins. For example, the Sun is about 93,000,000 miles from Earth, and its electric field must travel and expand according to the “radius-squared law” ($1/r^2$) for electric fields generated by point charges. For magnetic fields, the field strength calculations are more complex and depend on whether the field source is a static point, a static dipole, a current of accelerated charged bodies, or some other configuration that generates a magnetic field.

Electrical field carriers. The electrical field force spreads out from any charged particle or body, whether the body is moving or not. For a large-scale example, the Sun is positively charged, and the planets in the solar system are negatively charged with respect to the Sun. For a small-scale example, every little cosmic particle (such as a proton, electron, or charged atom or molecule) that passes through the solar system also carries an electrical field force with it. Individual particles can have a stronger or weaker positive charge with respect to the Sun.



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Magnetic field generators. It would be incorrect to say that particles or bodies are “carriers” of magnetic fields. Instead, magnetic fields are generated by the movement of charged particles (protons, electrons, molecules) when they move through space. But not just any movement will do. Specifically, charged particles moving in a linear line at a constant speed will not generate magnetic field forces. Instead, the particle must be *accelerated* along a path to generate a magnetic field.

Technically, *accelerated* means to speed up, to slow down, or to follow a curved path through space. For example, electrons moving back and forth in an alternating current cable will generate a magnetic field. Particles from space that curve toward the Earth also create magnetic fields.

(According to known physics, Earth’s big magnetic field must be generated by massive numbers of charged particles somehow moving in a circular (*accelerated*) path inside or outside of the Earth. But the exact source of Earth’s magnetic field is not yet known to science.)

Now that we have prepared for the evaluations by discussing the evaluation criteria and some known laws of physics and nature, we can evaluate the first theory of crustal shift by White. White’s story used the magnetic field force as the motive force for a crustal shift.



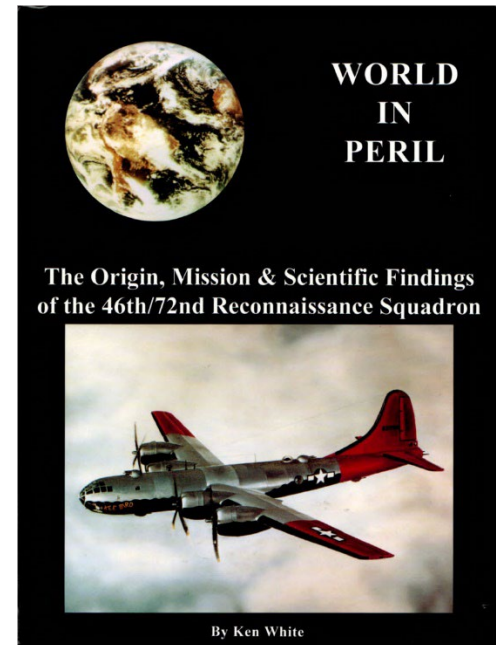
THE GREAT CRUSTAL SHIFT HOAX

Evaluation of *World in Peril* - White

This chapter applies the evaluation criteria to the crustal shift theory in White's book *World in Peril* (White1994).

In 1994, Ken White published *World in Peril* (2nd ed), *The Origin, Mission & Scientific Findings of the 46th/72nd Reconnaissance Squadron*. His father, Major Maynard White, USAF, managed *Project Nanook* in Alaska between June 1946 through August 1948. The main purpose of the project was to develop new military capabilities in polar navigation.

The book was also released as *World in Peril, The Story Behind the Discovery of Imminent Global Change*. Only three chapters (28, 29,30) and 6% (18 pages out of 291) of White's book are relevant to polar wander, Earth catastrophes, and crustal shifts. And even more narrowly, only Chapter 30, *The Flip of the Earth* (8 pages, 2.7%), is directly relevant to crustal shifts. These small page counts already mean that White did not intend his book to be a serious argument for a crustal shift theory.



White explained that *Project Nanook* found the magnetic north pole had wandered 125-200 miles farther than expected from its predicted position. The unexpected movement and speed-up of the pole concerned the military because previous theories had associated magnetic pole excursions with cataclysms and catastrophes. Accordingly, the military hired the RAND corporation to do some lab experiments about magnetic poles and then classified the results of the experiments.

In Chapter 30, White did not make any claims about 1) the triggering event, 2) the conditions of the asthenosphere, or 3) the duration of a crustal shift. He only reported that the military considered the magnetic field force as a possible motive force for a crustal shift based on the results of the lab experiments. White also suggested that undigested food found in a frozen Alaskan mammoth might be a clue to the duration of a polar flip. In other words, he suggested that the duration could be as short as one day because the mammoth had not digested the food before the mammoth was frozen.

The main goal of White's book was to document his father's experience on *Project Nanook*. He only incidentally connected the unexpected magnetic pole wander with a crustal slip theory in a small section of his book. He asked a guest author (Magill) to write a chapter on the related geological history. Then, he reported what the military lab experiments suggested about a possible crustal shift.

For these reasons, White's book is not a serious argument for crustal shifts. It can be ignored. Nonetheless, the following paragraphs compare his book with the evaluation criteria.



THE GREAT CRUSTAL SHIFT HOAX

Evaluation

Regarding the general criteria for a serious theory of crustal shift and using the simple scoring system described earlier, White's book:

- 0, Was not clear about many things (such as how the magnetic field would grip the crust)
- 1, Did narrow the scope to a crustal shift
- 0, Did not claim anything – he only reported some findings by the military
- 0, Did not specify any assumptions
- 0, Did not specify a complete theory
- **Score 1 out of 5**

Regarding the specific criteria for a serious theory of crustal shift, White's book:

- 0, Did not specify a source for the event (like what caused the magnetic pole to wander)
- 1, Did specify a trigger for the event – magnetic pole reaching the geographic pole
- 1, Did report crustal slip to the equator as the process (the military lab experiment)
- 1, Did claim the magnetic field force as the motive force (the military lab experiment)
- 0, Did not specify a duration for the event
- 0, Did not specify a speed for the event (but hinted at a day from the frozen mammoth)
- 0, Did not specify a recurrence frequency for the event
- 0, Did not specify serious numerical calculations or estimates for the event
- 0, Did not specify how the gravitational force operated in the event
- 0, Did not specify how the electrical force operated in the event
- 0, Did not specify how the magnetic force operated in the event (grip, force, directions)
- 0, Did not specify how the frictional force operated in the event
- **Score 3 out of 12**

Regarding the natural laws criteria, White's book:

- -20, violated Newton's Laws of Motion (crust moved while the core did not)
- -20, violated the conservation of angular momentum (core continues to rotate normally)
- -20, violated the characteristics of motive forces (magnetic field gripped crust but not the core)
- -20, ignored the gravitational force
- -20, ignored the frictional force (implied the magnetic force would “impel” the crust to move)
- -20, misunderstood rotational axes in free space (core continued to rotate as normal)
- **Score -120 out of -120**

Total score White's theory = 1 + 3 + -120 = -116, a Negative Score and Invalid

At the time of this writing, the magnetic pole had already crossed over the geographic pole with no crustal shift. That fact alone proves the military (RAND Corporation) crustal shift theory to be false.



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The next two chapters will show additional evidence that Earth's magnetic field cannot cause a crustal shift, as described by the lab experiments.

- The first chapter that follows shows why it is impossible for the magnetic field force to shift the crust in the manner described by the military lab experiment.
- The second preparation chapter shows some simple calculations about the Earth that should be included in any serious crustal shift theory.

Evaluation of the Magnetic Force

This section explains why it is impossible for the magnetic force to carry out a crustal shift. The magnetic force required for the shift breaks multiple laws of physics and nature. See the notes after the summary for more information.

Why Magnetic Field Theory Fails		Summary
	Magnetic Force Has No Grip	Thus, magnetic force cannot move the crust.
1	The magnetic pole passed the geographic pole in 2022-2023, and nothing happened.	Thereby proving the Pentagon/RAND theory false.
2	The magnetic force has no serious grip on the crust of non-magnetic granite, dirt, and water. Else the recent magnetic pole excursions would have shifted the crust.	p191, " <i>It is believed</i> that the crust becomes discernably magnetized over time. <i>It may be</i> that induction will impel the crust to follow the magnetic pole." But the crust is not magnetic. No grip means no crustal shift.
3	Earth's axis of rotation is not fixed (like turbines or washing machines)	This theory assumes a fixed rotational axis (like turbines or washing machines). Impossible.
4	The axis of rotation in free space adjusts position instantaneously	This theory assumes a non-adjusting rotational axis. Impossible.
	Law of Conservation of Angular Momentum	The core must rotate opposite the crust.
5	Conservation of Angular Momentum requires the core to move opposite.	This theory says the core rotation does not change and violates the laws of nature.
	The Magnetic Force Cannot Divide.	The magnetic force cannot push the crust and core in opposite directions. Impossible.
7	The magnetic force cannot divide at the asthenosphere layer.	This theory says the magnetic force would move the crust but not the core. Impossible.



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Why Magnetic Field Theory Fails		Summary
8	Magnetic force cannot first accelerate and then decelerate the crust	Magnetic forces cannot suddenly reverse direction halfway through a shift. Impossible.
	Duration and Speed of Crustal Shift	The crustal speeds are impossible.
9	White references a fast-frozen Alaskan mammoth as a clue to the duration.	This theory is incomplete. It does not specify the duration of the move nor the speed of the crust.
	Crustal Weight and Friction	The MF Theory ignores friction. Impossible.
10	Frictional area is 506,000,000 sq km, or 195,000,000 sq mi **	This theory is incomplete. It does not mention friction, breaking, or folding of the crust, etc.
11	The frictional weight of the crust is 74,400,000,000,000,000,000,000 lb, or 74.4 <i>billion quadrillion</i> pounds. **	This theory is incomplete. It does not mention friction or what happens to the heat produced.
12	The frictional force is 7,440,000,000,000,000,000,000 lbf, or 7.44 <i>billion quadrillion</i> lbf. **	This theory is incomplete. It does not mention the frictional force or how to overcome it.

** Calculations are shown in the next chapter.

The magnetic force has no realistic grip on the crustal shell because the crust (granite, dirt, water) is generally non-magnetic (except for magnetic impurities and localized magnetic deposits).

Even if the crust was magnetic, the motive magnetic force could not act on the crust (“impel the crust to break free and move,” as White said) without also acting on the core in the same direction. But it is impossible for the magnetic force to push the crust in one direction and the core in the opposite direction. You can’t suddenly split a magnetic force at the layer between the crust and the asthenosphere. “Complete nonsense,” my physics teacher would say.

Similarly, consider the whole acceleration/deceleration cycle of the crust as it would shift and move the poles to the equator. Acceleration requires the force to act in one direction, and deceleration requires the force to act in the opposite direction. But the magnetic force *cannot* accelerate the crust in one direction and then suddenly reverse its direction halfway through the shift to decelerate the crust from its peak speed at the halfway point to zero velocity at the equator. (And you know what my physics teacher would say to that!)

White’s book also fails to mention anything about the frictional force. For example, the table above uses a small coefficient of friction (.1) that is characteristic of slippery motor oil between two smooth metal surfaces. And still, using that almost-frictionless resistance, the calculated frictional force is 7.44 *billion quadrillion* pounds-force. That’s too big a force to leave out of a crustal shift theory!



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Simple Calculations About Earth

The following table shows some simple calculations about the Earth and a crustal shift. The most difficult calculation is the volume of a sphere, which is normally taught in junior or senior high schools. *These calculations should be done by any book that promotes a serious crustal shift theory.*

Using the calculated results below, a crustal shift must accelerate the crustal shell against a frictional force to a peak speed at the halfway point between the pole and the equator. The force required to do that is 7,440,000,000,000,000,000 pounds-force (lbf) or *7.44 billion quadrillion* pounds-force!

For a 24-hour shift or less (suggested by White, Thomas, and Davidson), the driving force must first overcome the frictional force and then *accelerate the crustal shell to a peak speed of 518 MPH in under 12 hours, which is a speed as fast as the fastest Learjet*. Then, the force must decelerate the crust back down to 0 MPH again in the same amount of time to stop the poles on the equator.

Explanations of Calculations

The following tables show how the numbers were calculated.

Scientific Notation. The numbers are all given in scientific notation for convenience. For example, the outer radius of the Earth in Imperial units is 3.96E+03, which means 3.96 plus moving the decimal point three digits to the right. That gives 3.96, 39.6 (1 digit), 396.0 (2 digits), and 3,960 (3 digits to the right). The outer radius of the Earth is about 3,960 miles.

The first table shows how to calculate the volume of the crust. (1) Calculate the volume of the Earth using the outer radius of the crust. (2) Calculate the average thickness of the crust. The continental crust (maybe 25 miles thick) is about three times thicker than the ocean-floor crust (about 6 miles), so we need to take an average. The table below uses 15 miles as the average. (3) Calculate the volume of the Earth under the crust by using the shorter inner radius = outer radius – thickness of crust = inner radius = 3,940 miles. (4) Subtract the two volumes to get the volume of the crust, which is 3.05E+09 or *three trillion* 3,050,000,000 cubic miles of granite. That is a lot of rock to accelerate!

Description of Calculation	Units	Metric	Imperial	Units
Outer radius	km	6.37E+03	3.96E+03	Mi
Crust thickness avg	km	2.50E+01	1.55E+01	Mi
Inner radius	km	6.35E+03	3.94E+03	Mi
Outer volume = $(4/3)(\pi)r^3$	km ³	1.08E+12	2.60E+11	mi ³
Inner volume	km ³	1.07E+12	2.57E+11	mi ³
Crust volume = outer vol – inner vol	km³	1.27E+10	3.05E+09	mi³



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Next, we calculate the speeds required to move the polar region to the equator in 24 hours. (1) The distance to travel is about one-quarter of the polar circumference of the Earth, or about 6,210 miles. (2) The time of the event is $2.40\text{E}+01 = 24.0$ or 24 hours. (3) That gives an average speed over 24 hours of $6,210 / 24 = 259$ MPH. (4) The time to accelerate to peak speed is 12 hours, half of the 24 hours. (5) But the crust starts and ends at 0 MPH. Therefore, it must reach a peak speed of twice the average speed ($259 * 2 = 518$ MPH) in the middle of the move and then decelerate again. (6) The distance traveled to the peak speed point is half of the total distance ($6,210 / 2 = 3,110$ miles). (7) And the time to decelerate is also 12 hours if we have symmetric acceleration and deceleration rates.

A peak speed of 518 MPH is about as fast as the fastest Learjet 60 XR.

Description of Calculation	Units	Metric	Imperial	Units
Distance from pole to equator	km	1.00E+04	6.21E+03	mi
Time elapsed	hr	2.40E+01	2.40E+01	hr
Average speed	km/hr	4.17E+02	2.59E+02	mi/hr
Time to accelerate to peak halfway there	hr	1.20E+01	1.20E+01	hr
Peak speed	km/hr	8.33E+02	5.18E+02	mi/hr
Distance @ peak speed	km	5.00E+03	3.11E+03	mi
Time to decelerate	hr	1.20E+01	1.20E+01	hr

Next, we calculate the frictional force that opposes the crustal shift. To do that, we need to calculate the normal force (perpendicular to the sliding surfaces) that pushes the crust down on the molten asthenosphere.

The normal force is driven by gravity, so we need to figure out the weight of the crust and divide it by the surface area of the inner crust to get a weight per square mile. (1) The surface area of the outer crust is calculated using the out radius from the first table. This line is present to show the formula used. (2) The inner surface area of the crust is calculated using the inner radius from the first table. (3) We need to determine the density (weight) of granite per cubic mile because our crustal volume was calculated in cubic miles. The table works up to miles by using cubic feet, then cubic yards, and then cubic miles. (4) The mass or weight of the crust is volume * density.

Description of Calculation	Units	Metric	Imperial	Units
Outer surface area = $4(\pi)r^2$	km ²	5.10E+08	1.97E+08	mi ²
Inner surface area of bottom of the crust	km²	5.06E+08	1.95E+08	mi²
Density of granite	lb/ft ³		1.66E+02	lb/ft ³
Density of granite	kg/m ³	2.66E+03	4.48E+03	lb/yd ³
Density of granite	kg/km ³	2.66E+12	2.44E+13	lb/mi ³
Mass/Weight of Crust (vol*density)	kg	3.38E+22	7.45E+22	lb



THE GREAT CRUSTAL SHIFT HOAX

Notice that the weight of the crust above already allows for gravity because gravity was included in the density of granite. (1) So, the weight of the crust *is already* the normal (perpendicular to the surface) force. (2) To calculate the total frictional force, we need to multiply the normal force by some coefficient of friction. Here, it gets tricky. No one in a lab has ever measured the coefficient of friction for crustal granite moving over the molten asthenosphere below the crust. (3) You could pick any coefficient of friction that you wanted to use here. To give the theories all the help I could, I used the coefficient of friction between two smooth metal surfaces (like ball bearings or bushings). That coefficient is 1.00E-01 or 0.1. Obviously, that is much too low. The bottom of the crust is not smooth and has all manner of mountainous projections into the magma layer. And the magma is certainly not as slippery as oil on smooth metal plates. (4) But I used it anyway. Thus, the total frictional force on the crust is 7.44E+21, or a whopping 7,440,000,000,000,000,000 pounds-force (lbf), or 7.44 *billion quadrillion* lbf.

That is the frictional force that the imaginary centrifugal force must overcome to *begin* accelerating the crust of the Earth. Then, the imaginary force must *accelerate* the crust up to the speed of the fastest Learjet, suddenly reverse direction, and slow the crust down to 0 MPH again.

Description of Calculation	Units	Metric	Imperial	Units
Gravity	m/s^2	9.80E+00	3.22E+01	ft/s^2
Normal force crust (N or lbf)	kgm/s^2	3.31E+23	7.44E+22	lbf
Coeff friction magma (oil & smooth metal)		1.00E-01	1.00E-01	
Frictional force total crust	N	3.31E+22	7.44E+21	lbf

Notice that the time to peak speed would not actually be 12 hours. That's because the acceleration and deceleration rates of the two legs of the crustal shift movement would not be symmetrical. The acceleration leg must fight the frictional force to accelerate the crust, whereas the deceleration leg gets help from the frictional force to slow the crust down.

Examples that Disprove Centrifugal Force

This section shows that it is impossible for “unbalanced” masses such as the continental ice caps to be driven toward the equator by *imaginary* centrifugal forces.

Think Like a Physics Teacher – Analyze the Forces

Fifty years ago, my physics teacher taught us students how to analyze forces on an object. First, make a diagram on paper and draw a circle around the object of interest. (The circle represents a sphere in three-dimensional space.) Then, enumerate and draw a line across the circle boundary for each force that acts on the object inside the circle.

Not hard, right? Let’s do it for two simple examples. The first example is a child’s marble on a flat hard table. The second example is a skateboarder who rides on frictionless ball-bearing wheels.

Marbles Do Not Roll Toward the Equator

Consider what happens when you place a child’s marble on a flat, hard table. Let the table represent the Greenland land mass, and the marble represent the ice cap.

The Marble on a Flat Hard Table Scenario	Greenland Ice Cap Equivalent
Frictionless interface between the marble and table	The molten layer under the Earth’s crust
The marble, ready to roll if you even blow on it	The polar ice weights and masses

According to Einstein and the crustal shift theories, the imaginary centrifugal forces of the Earth will act on the ice caps to force the ice caps away from the rotational axis of the Earth. The ice caps will shift the entire crust of the Earth against the frictional forces of the liquefied asthenosphere so that the poles move to the equator in less than 24 hours at a speed faster than the fastest Learjet.

Those would be very strong forces, right? *7.4 billion quadrillion pounds-force* according to the calculations above, right?

So, what happens to a marble placed on a flat table anywhere on the Earth? *Nothing, right?*

But what about the imaginary centrifugal forces and momentum that Einstein talked about? The marble is spinning around the rotational axis of the Earth, just like the ice caps are, right? Then why





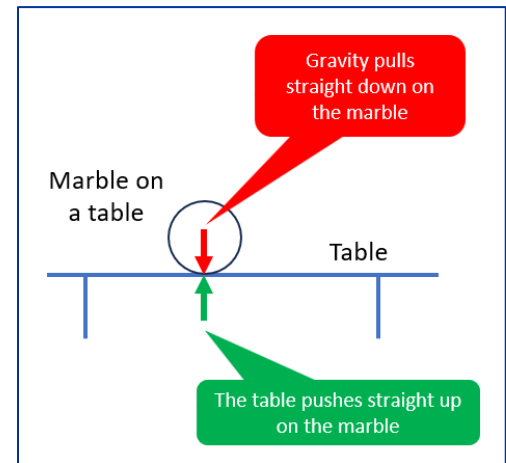
THE GREAT CRUSTAL SHIFT HOAX

doesn't the marble roll toward the equator? After all, Einstein, Hapgood, Thomas, and Davidson said that the force would shift the whole crust of the Earth on a liquefied underlayer, right?

But *nothing happens*. My physics teacher would smile at us students and say something like this, "If there are no unbalanced forces on an object, there can be no change in motion. Everything else is just imagination."

Newton's Second Law of Motion says the same thing: "*The change of motion of an object is proportional to the force used.*"

In other words, the marble doesn't move sideways on the frictionless table surface because there is no unbalanced force acting on it. Period. The marble doesn't move because the *imaginary* centrifugal force does not exist in nature – it is *imaginary* in the minds of all of them - Einstein, Hapgood, Thomas, and Davidson.



Skateboarders Do Not Roll Toward the Equator

A second bigger example considers a Greenland skateboarder who wants to get a free ride to the equator. Everyone understands skateboards and skateboarders. A skateboarder rides on a "frictionless" layer (the wheels) underneath his body mass and his feet.

In crustal shift theories, the frictionless wheel bearings represent the molten asthenosphere layer, and the skateboard and rider represent the Greenland glacier and ice cap masses.

Skateboard Element	Greenland Glacier Equivalent
Frictionless skateboard wheels and bearings	The molten layer under the Earth's crust
Skateboard, rider, and a backpack on top of the wheels	The polar ice weights and masses

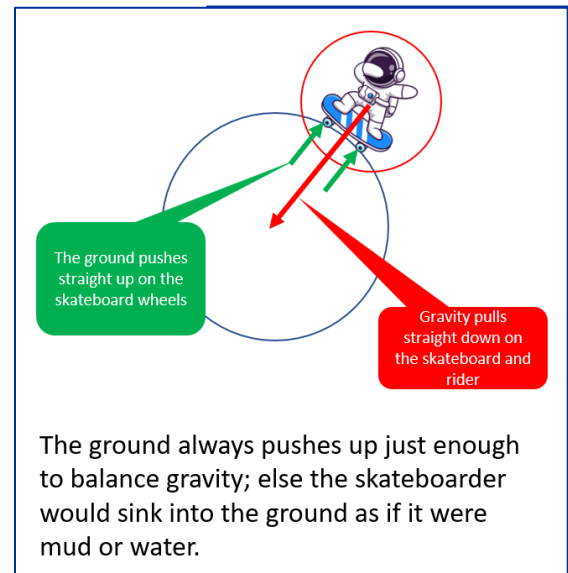


THE GREAT CRUSTAL SHIFT HOAX

Draw a Diagram

Let's begin the analysis as my physics teacher taught us students. Draw a skateboarder on the crust of the Earth somewhere. For convenience, the image is shown as if the skater was on top of a level spot on the Greenland glacier (with America facing out of the page). It doesn't have to be in Greenland - any level spot on the Earth would do. The forces on the skateboarder would be the same anywhere on the planet.

In this example, the skateboarder is standing on a frictionless layer (the ball bearings in the wheels). The skateboarder on wheels is like the crust of the Earth sitting on a liquified layer of molten magma in the asthenosphere.



Observe What Happens – Nothing!

Watch the skateboarder. He is on his board and ready to travel. He read some books about the crustal shift theories, and he wants to experience the centrifugal forces that he has read so much about. Einstein spoke of them as if they were real, right? So they must be real, right?

So the skateboarder points his board at the equator to accelerate in the right direction, climbs on his frictionless skateboard, and ... *nothing happens. Nothing at all.* And pretty soon, the skateboarder is thinking... *What?? WTF? But Einstein himself agreed with Hapgood, Thomas, and Davidson and said that the centrifugal force is real! Were they lying? Why isn't this working?*

On a level surface, the skateboarder goes nowhere, just like the marble, even if his board is pointed toward the equator. That the mass of the skateboarder goes nowhere – even on a frictionless surface – is proof positive that *there are no unbalanced forces that are driving him toward the equator.* No forces, and therefore, no motion. The same holds true for the ice caps.

The skateboarder is puzzled, thinking, “*But what about the centrifugal force? What about the Earth spinning? What about me spinning down to the equator, where the centrifugal forces are the strongest, as the theories said?*”

And what about Einstein? What about the centrifugal forces he cited in the foreword to Hapgood's book? What's really going on?”



THE GREAT CRUSTAL SHIFT HOAX

My physics teacher might say, “What’s really going on is that *imaginary centrifugal forces do not exist*. That’s why the skater doesn’t move – there are no unbalanced forces. Otherwise, the skateboard would move, wouldn’t it?”

My teacher might also have said (smiling), “And Einstein clearly didn’t know what he was talking about – treating centrifugal forces as if they were real. That’s just talking nonsense.”

Draw a Circle and Analyze the Forces on the Skateboarder

Let’s have a detailed look at the forces. The diagram shows the forces of interest. The blue circle is the Earth. The red circle is our circle for analysis. What forces cross the red circle line?

- The force of gravity is shown in red. Gravity pulls straight down on the skateboard. Gravity does not pull the skateboard toward the equator or toward the North Pole. Straight down only.
- The force of the ground pushes up on the wheels of the skateboard. The ground (being solid) always pushes up just enough to balance gravity. If gravity was stronger than the ground force, the wheels would sink into the ground until the upward forces from the ground balanced the downward force of gravity. But the skateboard doesn’t sink into the ground, so we conclude that the upward forces of the ground exactly match the downward pull of gravity. (If the ground pushed up *more* than gravity, then both the ground and the skater would fly off into the sky.)
- No unbalanced electromagnetic forces operate on the skateboarder because the skateboarder is not magnetic. If such forces did exist, the skateboarder would move in the direction of those forces. But since the skater goes nowhere, we must conclude that no unbalanced electromagnetic forces can get a grip on the skateboarder’s flesh.

The analysis shows that only two forces act on the skateboarder – 1) gravity down and 2) the ground up. *No imaginary centrifugal forces exist* to move (rotate) the skateboarder down the curved surface of the Earth toward the equator. Otherwise, the skateboarder would be getting a free ride to the tropics!

The same holds true for giant cargo ships in the “frictionless” ocean water. If they turned off their engines and pointed their bows to the equator, *nothing would happen*. There are no imaginary centrifugal forces, and the ships don’t move. And it’s the same for the ice caps and crustal shift theories – it’s all imaginary in the minds of the authors.

Draw a Circle and Analyze Forces on the Greenland Ice Mass

Now consider the Greenland island and ice mass as described by Hapgood, Thomas, and Davidson. Greenland can be analyzed in the same way. Replace the skateboarder with the Greenland ice cap.



THE GREAT CRUSTAL SHIFT HOAX

Also, imagine that the Greenland land mass is not connected to the rest of the crust around it because we don't want anything to stop the motion of Greenland toward the equator. Imagine that Greenland is an island, floating in the ocean like a big ship, floating on a molten layer of magma or resting like a marble on a table or a giant skateboard with frictionless wheels that ride on the crust.

What happens to the free-floating Greenland mass? *Nothing*. And you know why by now—because the *imaginary* centrifugal force does not exist. The gravitational force pulls the land and ice straight down. The water (or molten magma) pushes the land up just like the table pushes the marble up against the gravitational force.

In more detail, the land mass sinks into the water or molten asthenosphere until the upward forces balance the downward forces. Gravity does not push the mass toward the equator. *The imaginary centrifugal force does not exist* and cannot push anything anywhere. Thus, the Greenland land mass goes nowhere, just like the skateboarder and the marble on the table.

- Gravity pulls *straight down* on the mass toward the Earth's center; it is not a *sideways* force.
- The water or the molten layer pushes the mass upward. The mass moves up or down until the downward force (gravity) and the upward force (water, magma, or table) are exactly balanced. Then the island, skateboarder, or marble just sits there at the balanced depth.
- Invisible (and minor) magnetic forces cross the circle. Such fields are everywhere on the planet and drive compass needles. But they have no effect on the Greenland mass, the marble, or the skateboarder. That's because dirt, ice, skateboarders, and marbles are not magnetic, so no magnetic forces can get a "grip" on the land, ice, skateboarder, or marble to push them around. And besides, the magnetic forces are too weak anyway.

Summary

There are no "sideways" imaginary centrifugal forces on the marble, the skateboarder, or the Greenland ice cap. It follows that no forces exist to move the Earth's whole crust to a new equatorial position.

As my physics teacher might have said (smiling again), "No unbalanced forces mean no movement. Everything else is just imaginary nonsense."

Evaluation of the Imaginary Centrifugal Force

This table shows why centrifugal force cannot possibly shift the crust.



THE GREAT CRUSTAL SHIFT HOAX

Why the Centrifugal (CF) Model Fails		Explanation
No Forces Exist to Drive the Shift		Thus, the shift cannot occur.
1	No net motive force exists. Centrifugal force does not exist.	Gravity balances straight-line inertia.
2	Forces are always balanced else the skateboarder would move	A motionless skateboarder on frictionless wheels proves the CF theory is wrong.
3	The axis of rotation is not fixed (like turbines or washing machines).	CF model fixed axis assumption is wrong.
4	The axis of rotation adjusts instantly.	CF model non-adaptive axis is wrong.
Law of Conservation of Angular Momentum		The core must rotate opposite the crust.
5	Conservation of Angular Momentum requires the mantle/core to move	The CF theory says the core does not move and disagrees with the laws of nature.
6	Centrifugal force cannot move the inner core in the reverse direction	CF force theory violates the laws of nature.
7	Centrifugal force cannot decelerate the crust from peak to equator	CF model is inconsistent. First, it claims no friction to move the crust and then claims friction to slow the crust down at the equator.
Duration and Speed of Crustal Shift		The speeds of CF theories are impossible.
8	A 24-hour move requires an average speed of 250 mph and a peak speed of 500+ mph (White, Davidson)	CF theories require the crustal shell to move as fast as the fastest Learjet with no crustal friction. Impossible.
9	A 12-hour move requires 500+mph average, 1000+mph peak speed (Thomas)	Twice as fast is twice as impossible!
Friction		The theories ignore friction - impossible.
10	The frictional area is 195,000,000 sq mi	CF treats friction as negligible. Impossible.
11	Frictional weight (normal force) is 74,400,000,000,000,000,000 lbf	Crust weight is <i>74.4 billion quadrillion pounds</i> , and CF says approximately no friction. Impossible.
12	Frictional force is 7,440,000,000,000,000,000 lbf	CF theory moves <i>74.4 billion quadrillion pounds</i> against a frictional force of <i>7.44 billion quadrillion pounds-force</i> at 518 mph, as fast as the fastest Learjet. Without breaking the crust up. Impossible.



THE GREAT CRUSTAL SHIFT HOAX

Evaluation of *Earth's Shifting Crust* – Hapgood

Charles Hapgood published a book called *Earth's Shifting Crust* in 1959, with the collaboration of James Hunter Campbell (a mechanical engineer) and a foreword by Albert Einstein. Hapgood was careful in his acknowledgments to recognize the contributions of many other people who contributed directly or indirectly to the contents of the book.

I believe that citing all those people and writing a fat, complex book with very vague and incomplete mathematics from Campbell was done to give weight and substance to the hoax. (It was also very telling that Hapgood carefully “credited” all the hoax mathematics and theories to Campbell. Why? I think it was done so that Hapgood could somewhat distance himself from the core argument of the hoax.)

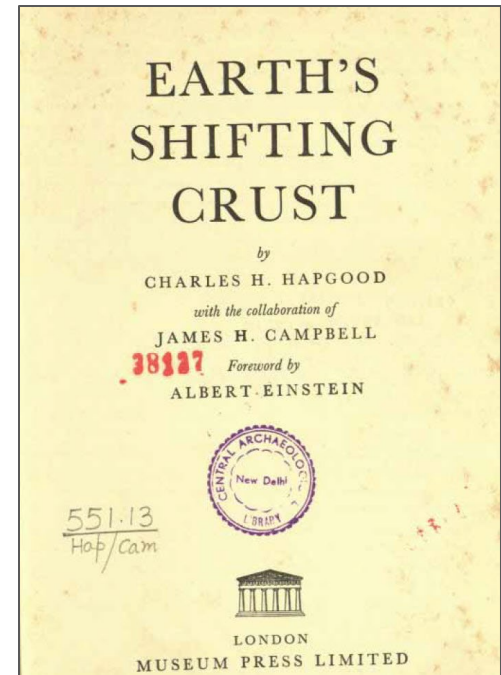
Hapgood stated three goals for his book (other than to carry out the hoax itself):

- First, to establish that numerous displacements of the earth's crust have occurred.
- Second, to describe a displacement mechanism (the work of the mysterious Mr. Campbell).
- Third, to show that the hypothesis of crust displacement provides an acceptable solution to many of the problems in the geological record of the Earth.

As Hapgood tells it, the starting motivation for his research and book came in 1949 from Henry Warrington, who was a freshman in one of Hapgood's university classes at Springfield College in Massachusetts. Warrington asked Hapgood to question the theory of gradual geologic change, which held that the unchanging poles have always been in their current location over time.

Hapgood began to research the topic, and the effort grew over time with the help of other students. It became more organized when the group encountered the novel theory of Hugh Brown (also a mechanical engineer like Campbell). Brown's theory was that the (unbalanced) ice caps might have frequently capsized the *whole* Earth—crust, mantle, and core included—because of unbalanced “centrifugal effects.” Brown argued that centrifugal effects could be seen in cases where a rotating body was not perfectly centered on its fixed axis of rotation.

Dozens of other specialists in various fields were named by Hapgood as contributing to the theory over the following three years. However, the project stalled because they could not convince themselves that the ice caps had enough rotational energy to overcome the stabilizing influence of





THE GREAT CRUSTAL SHIFT HOAX

the fat “flywheel” bulge of mass around the equator. They thought that the oblate shape of the Earth would act like the flywheel on a gyroscope and resist any changes to the orientation of the rotational axis of the Earth.

Eventually, the project was unblocked by Campbell, who conceived that tilting the rotational axis of the *whole* planet was not required to explain the geological record. Instead, the anomalies could be explained by shifting *only the crust* of the planet. In that case, the “unbalanced” ice masses would have enough rotational energy to slowly slide the crustal shell of the Earth over a permissive molten layer (the asthenosphere) to various new geographical locations over time.

Thus, the theory of *crustal displacement* or *crustal shift* was born, and the Hapgood team was unstuck. They continued to develop the theory with supporting assumptions and calculations, and Hapgood published the research in his book, *Earth's Shifting Crust* (1958).

The contents of the book reviewed a large amount of geological evidence that could not be explained by the existing theories of the day. For each major type of evidence, the book proposed the new *crustal displacement* theory to solve the geological anomalies.

The main goal of Hapgood's book was to show that “uncompensated” polar continental ice masses in Greenland and Antarctica could drive the rotation of the crustal shell of the Earth to reposition the polar regions to the equator and solve the geological anomalies. By “uncompensated masses,” Hapgood meant the land masses (like ice caps and glaciers) that were located above the imaginary sphere that represented the line (sphere) where masses would naturally sink into the asthenosphere.

A mass is said to be *isostatically compensated* if the mass is free to sink to its natural floating point in the asthenosphere. In that case, no unbalanced centrifugal force is expected to exist because the centrifugal forces would act equally on all areas of the crust, all around the Earth. No net centrifugal force would exist to push the ice caps toward the equator.

However, Hapgood made the argument that both polar ice caps were NOT isostatically compensated, which meant that they were located *above* the natural floating depth of Greenland or Antarctica. It's as if the ice caps were “up above the edge of the table” where the imaginary centrifugal forces could see them and operate on them to drive the ice caps toward the equator.

Only about 10% of Hapgood's book (about 45 of 450 pages) discusses the operation and mechanism of the crustal shift; the other 90% concentrates on the geological record. Hapgood named the last chapter of 39 pages **Campbell's Mechanism of Displacement**. (See how Hapgood distanced himself from the hoax theory?)

The crustal shell that was to be moved can be visualized as the spherical peel of an orange or as the paper-thin crust of an oblate kiwi fruit. The Earth's crust is perhaps 15 miles thick on average, whereas the average radius of the Earth is 3963 miles. Therefore, the crust of the Earth is only about



THE GREAT CRUSTAL SHIFT HOAX

$15/3963 = 0.004 = 0.4\%$ of the length of the radius and is an extremely thin layer compared to the radius of the Earth. If Earth was an apple, the crust would be like the fragile, thin peel on the apple.

Assumptions

Hapgood stated that the crustal displacement theory depended on “two assumptions, and on two only.” First, “that a continental ice cap is largely or entirely uncompensated isostatically.” And second, there exists “at some point below the crust a weak layer that will permit the displacement of the crust over it.”

In other words (I paraphrase here), he said, “If we assume 1) the existence of ‘uncompensated’ ice caps, 2) the existence of an *imaginary* centrifugal force that 3) can grip the ice caps, 4) the existence of an *imaginary* molten asthenosphere that 5) permits easy shifting of the Earth’s crustal shell, and 6) if we ignore the gravitational force, 7) the frictional force, 8) Newton’s Laws of Motion, 9) the Law of Conservation of Angular Momentum, and 10) ignore other known laws of physics and nature, then shifting the poles to the equator is possible.”

Wow. If he makes ten false or unrealistic assumptions that go against the laws of the universe, then shifting the poles to the equator is possible. “Nonsense,” my physics teacher would say. “Complete and imaginary nonsense.”

Evaluation

The following paragraphs evaluate Hapgood’s book using the evaluation criteria.

Regarding the general criteria for a serious theory of crustal shift and using the simple scoring system described earlier, Hapgood’s book:

- 0, Was not clear about many things (e.g., about the use of an imaginary centrifugal force)
- 1, Did narrow the scope to a crustal shift
- 1, Did claim or suggest that crustal displacement would explain the anomalies
- 1, Did specify assumptions
- 0, Did not specify a complete theory
- **Score 3 out of 5**

Regarding the specific criteria for a serious theory of crustal shift, the book:

- 0, Did not specify a source for the event
- 0, Did not specify a trigger for the event
- 1, Did specify the process for the event - crustal shift 30 degrees toward the equator
- 1, Did claim an imaginary centrifugal force as the motive force
- 1, Did specify a duration for the event (5,000 to 20,000 years)



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- 1, Did specify a speed for the crust (infinitesimally slow over 5,000 years)
- 0, Did not specify a recurrence frequency for the event
- 0, Did not specify serious numerical calculations or estimates for the event
- 0, Did not specify how the gravitational force operated in the event
- 0, Did not specify how the electrical force operated in the event
- 0, Did not specify how the magnetic force operated in the event
- 0, Did not specify how the frictional force operated in the event
- **Score 4 out of 12**

Regarding the natural laws criteria, the book:

- -20, violates Newton's Laws of Motion (crust moved without the core)
- -20, violated the conservation of angular momentum (core continues to rotate normally)
- -20, violated the characteristics of motive forces (imaginary centrifugal force)
- -20, ignored the gravitational force
- -20, ignored the frictional force (assumed a “permissive” asthenosphere)
- -20, misunderstood rotational axes in free space (core continued to rotate as normal)
- **Score -120 out of -120**

Total score for Hapgood’s theory = 3 + 4 + -120 = -113, a Negative Score and Invalid

The evaluation shows that Hapgood’s theory (or more precisely, Campbell’s theory) of crustal displacement is invalid because it violates six known laws of physics and nature in the criteria. Moreover, Hapgood’s written explanation of the theory was mediocre (score 3 of 5), and his discussions of the key aspects of a crustal shift theory were incomplete (score 4 of 12).



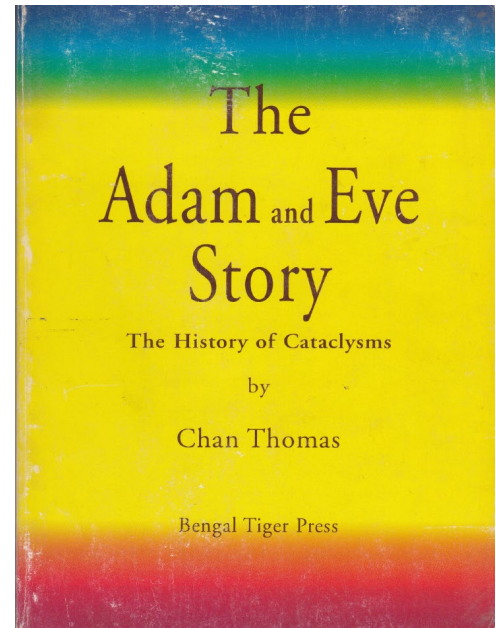
THE GREAT CRUSTAL SHIFT HOAX

Evaluation of *The Adam and Eve Story* – Thomas

Chan Thomas published the first edition of *The Adam and Eve Story, A History of Cataclysms*, in 1963 (Thomas1963). Parts of the book were censored by the CIA and did not become fully available until thirty years later, in 1993.

The book lacked focus because it jumped from topic to topic and included some very irrelevant chapters on politics and society toward the end. It could be viewed as a collection of personal notes and thoughts that Thomas made into a book.

The parts of the book relevant to a crustal shift included discussions of past legends, floods, biblical writings and his interpretations of them, and an experiment with mercury to support his treatment of the asthenosphere under the crust. His evidence led him to identify six recurrent cataclysms 4,550 to 14,750 years apart over the past 44,000 years.



And like Hapgood, Thomas used the imaginary centrifugal force acting on the ice caps to carry out the cataclysm and a frozen mammoth example to set the duration of the event – as short as 6 to 12 hours for the flip of the poles to the equator.

On the positive side, Thomas extended Hapgood's theory by adding the new concept that the molten layer below the crust would be made liquid by the recurrent collapse of the Earth's magnetic field whenever the solar system moved through a magnetic null spot within the Milky Way galaxy.

And Thomas was the first to describe an end-to-end theory, which provided a *source* (the magnetic null spot), a *trigger* (liquification of the asthenosphere), a *process* (crustal shift), a *motive force* (the imaginary centrifugal force), a *duration* (6 to 12 hours), and the usual *consequences* (floods, volcanoes, earthquakes, and massive loss of human and animal life).

Overall, Thomas advanced the theory of catastrophism by identifying a galactic source for the event (our solar system crossing the galactic equator) and by providing a complete end-to-end theory.

Evaluation

Regarding the general criteria for a serious theory of crustal shift and using the simple scoring system described earlier, Thomas' book:

- 0, Was not clear about many things (the use of an imaginary centrifugal force)



THE GREAT CRUSTAL SHIFT HOAX

- 1, Did narrow the scope to a crustal shift
- 1, Did claim or suggest that crustal displacement would explain the anomalies
- 0, Did not specify assumptions
- 0, Did specify a complete theory (many details were missing)
- **Score 2 out of 5**

Regarding the specific criteria for a serious theory of crustal shift, the book:

- 1, Did specify a source for the event (crossing the galactic equator)
- 1, Did specify a trigger for the event (melting asthenosphere layer)
- 1, Did specify the process for the event (crustal shift to the equator)
- 1, Did claim an imaginary centrifugal force as the motive force
- 1, Did specify a duration for the event (6 to 12 hours)
- 0, Did not specify a speed for the event (speed of the crust)
- 1, Did specify a recurrence frequency for the event (between 5K and 15K years)
- 0, Did not specify serious numerical calculations or estimates for the event
- 0, Did not specify how the gravitational force operated in the event
- 0, Did not specify how the electrical force operated in the event
- 0, Did not specify how the magnetic force operated in the event
- 0, Did not specify how the frictional force operated in the event
- **Score 6 out of 12**

Regarding the natural laws criteria, the book:

- -20, violates Newton's Laws of Motion (crust moved without the core)
- -20, violated the conservation of angular momentum (core continues to rotate normally)
- -20, violated the characteristics of motive forces (imaginary centrifugal force)
- -20, ignored the gravitational force
- -20, ignored the frictional force (assumed a “permissive” asthenosphere)
- -20, misunderstood rotational axes in free space (core continued to rotate as normal)
- **Score -120 out of -120**

Total score for Thomas’ theory = 2 + 6 + -120 = -112, a Negative Score and Invalid

The evaluation score shows that Thomas’ theory of crustal displacement is invalid because it violates all six of the known laws of physics and nature used in the evaluation criteria. Moreover, the theory was not clear, complete, or specific in its assumptions. It also failed to address half of the key issues that are specific to crustal shift events.



THE GREAT CRUSTAL SHIFT HOAX

Evaluation of *The Next End of the World* – Davidson

Davidson published *The Next End of the World* in 2021. One of the main goals of the book was to answer the challenge posed by a past researcher to all catastrophism theories to “explain all the evidence” in the geological record.

To that end, Davidson extended Thomas’s 1963 theory with an additional 55 years of modern scientific data that included a great deal of new solar, galactic, and geological evidence driven by the availability of new technologies and 55 years of additional research work in the field.

The first sections of Davidson’s book included chapters on the history of Catastrophism, the decline of Catastrophism after Thomas’ 1963 book, and the sudden reawakening of Catastrophism when the whole uncensored version of Thomas’ book from 1993 was rediscovered in 2018.

The last three sections of Davidson’s book addressed the issues of magnetic pole excursions, evidence for a solar micronova as the *trigger* for the event, and evidence that the next cycle is currently in progress.

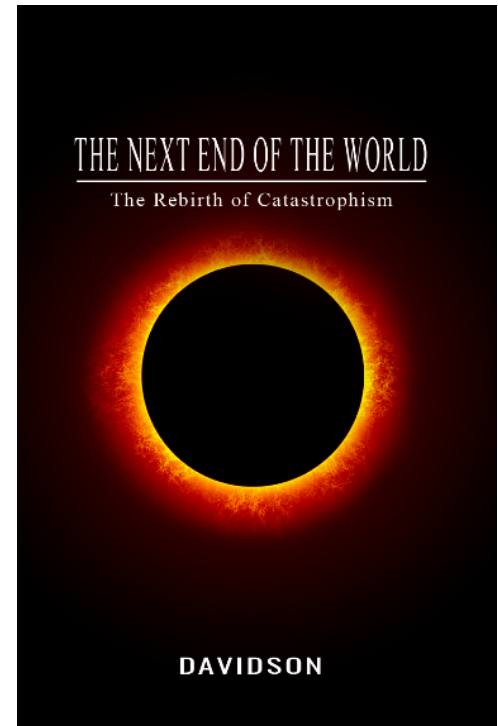
Davidson’s book is notable for being the first book after the reawakening of Catastrophism to identify new solar and galactic evidence that suggested a solar micronova as a key element of answering the challenge of “explaining all the evidence.”

Davidson’s end-to-end theory specifies a *source* (crossing the galactic current sheet), a *trigger* (a solar micronova and liquified asthenosphere layer), a *process* (crustal shift), a *motive force* (the *imaginary* centrifugal force), a *duration* (one day), and the usual *consequences* of the event (floods, slosh-back floods, volcanos, earthquakes, crustal shift to the equator, loss of the electric grid, and massive losses of animal and human life).

Davidson’s theory also specifies that the event would happen repeatedly, about every 12,000 years.

Evaluation

Regarding the general criteria for a serious theory of crustal shift and using the simple scoring system described earlier, Davidson’s book:





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- 0, Was not clear about many things (the use of an imaginary centrifugal force)
- 1, Did narrow the scope to a crustal shift
- 1, Did claim or suggest that crustal displacement would explain “all the evidence.”
- 0, Did not specify assumptions
- 0, Did specify a complete theory (many details were missing)
- **Score 2 out of 5**

Regarding the specific criteria for a serious theory of crustal shift, the book:

- 1, Did specify a source for the event (crossing the galactic current sheet)
- 1, Did specify a trigger for the event (solar micronova and liquified asthenosphere)
- 1, Did specify the process for the event (crustal shift to the equator)
- 1, Did claim an imaginary centrifugal force as the motive force
- 1, Did specify a duration for the event (one day)
- 0, Did not specify a speed for the event (speed of the crust)
- 1, Did specify a recurrence frequency for the event (about 12,000 years)
- 0, Did not specify serious numerical calculations or estimates for the event
- 0, Did not specify how the gravitational force operated in the event
- 0, Did not specify how the electrical force operated in the event
- 0, Did not specify how the magnetic force operated in the event
- 0, Did not specify how the frictional force operated in the event
- **Score 6 out of 12**

Regarding the natural laws criteria, the book:

- -20, violates Newton's Laws of Motion (crust moved without the core)
- -20, violated the conservation of angular momentum (core continues to rotate normally)
- -20, violated the characteristics of motive forces (imaginary centrifugal force)
- -20, ignored the gravitational force
- -20, ignored the frictional force (assumed a “permissive” asthenosphere)
- -20, misunderstood rotational axes in free space (core continued to rotate as normal)
- **Score -120 out of -120**

Total score for Davidson’s theory = 2 + 6 + -120 = -112, a Negative Score and Invalid

The evaluation score shows that Davidson’s theory of crustal displacement is invalid because it violates all six of the known laws of physics and nature used in the evaluation criteria. Moreover, the theory was not clear, complete, or specific in its assumptions, and it failed to address half of the key issues that are specific to crustal shift events.



THE GREAT CRUSTAL SHIFT HOAX

Remember that this evaluation is only for Davidson's crustal shift theory. The evaluation does not consider the general idea of catastrophes or the 12,000-year cycle model, both of which have enormous amounts of evidence to support them.

Summary of Evaluations

This section discusses the evaluation results. Here are some key high-level findings:

- The scores for the general and specific criteria categories show that all four books contained incomplete explanations of their crustal shift theories. They all did an incomplete job.
- None of the theories contained any serious attempt at providing numerical estimates of the masses, forces, accelerations, directions, friction, and crustal speeds involved in the shift. None of the theories engaged with the physics of the shift. None of the theories could survive the evaluation of a first-year physics student.
- The marble-on-a-table and the skateboarder examples clearly showed that there were no *imaginary* centrifugal forces that could push a frictionless mass of any size toward the equator. You can put a marble on a flat table or floor and do the imaginary centrifugal force experiment yourself. If the marble does not roll *toward the equator* every time, then as my physics teacher would say, "No motion means no unbalanced forces. Everything else is complete nonsense."
- All four crustal shift theories violate the known laws of physics and nature.

Table of Evaluation Scores

The following table summarizes the evaluation scores of the four crustal shift theories.

Keep in mind that White's book was never intended to be a book about a crustal shift theory. White only touched on crustal shifts because his father's *Project Nanook* team found an unexpected movement of the magnetic north pole. The military sponsors and contractors of the project recognized the association between magnetic pole excursions and previous anomalies in the geologic record that were associated with past catastrophes. Accordingly, they contracted for some lab experiments and then proposed the magnetic force as the motive force for a crustal shift.

The poor scores of the remaining three theories are negative because the theories violated the known laws of physics and nature, such as Newton's Laws of Motion and the Law of Conservation of Angular Momentum. All three theories omitted discussions about essential crustal shift topics, such as the role of the gravitational and frictional forces on the crust. Moreover, all three theories used Hapgood's imaginary centrifugal forces on the continental ice caps to shift the crust without affecting the motion of the inner core.



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Thus, all three theories are invalid because Hapgood's imaginary centrifugal force theory was invalid, and Thomas and Davidson copied and reused the invalid theory. None of the three authors did their basic first-year physics homework, even though all of them had easy access to universities, physicists, and first-year physics textbooks. Einstein played along, even though he was a physicist who had already been through a first-year physics course. I think all of the authors, including Einstein, deliberately avoided telling the truth to keep the hoax going.

Finally, note that the evaluation table is only about the *crustal shift* part of the catastrophism theories. The bigger picture of Catastrophism might otherwise be true, but it sorely needs a more plausible and valid mechanism than a crustal shift to carry out the event.

Criterion	White	Hapgood	Thomas	Davidson
General Criteria for Written Theories				
Clarity (no handwaving around key ideas)	0	0	0	0
Scope of the event (crustal shift or end-to-end)	1	1	1	1
Claims (of the trigger, release, force, duration, etc.)	0	1	1	1
Assumptions (clearly stated)	0	1	0	0
Complete (discusses gravity, friction, speed, etc.)	0	0	0	0
Subtotal, maximum 5	1	3	2	2
Specific Criteria for Crustal Shift Theories				
Source (galactic equator/current sheet)	0	0	1	1
Trigger (mag pole, solar micronova)	1	0	1	1
Event type (planetary flip or crustal shift)	1	1	1	1
Motive force (magnetic, centrifugal)	1	1	1	1
Duration (of the event)	0	1	1	1
Speed of motion (of crust or planet, MPH)	0	1	0	0
Recurrent Frequency (claim and estimate of)	0	0	1	1
Numeric estimates (of forces, masses, friction)	0	0	0	0
Operation of the gravitational force	0	0	0	0
Operation of the electrical force	0	0	0	0
Operation of the magnetic force	0	0	0	0
Operation of the frictional force	0	0	0	0
Subtotal, maximum 12	3	4	6	6
Violations of the Laws of Physics and Nature				
Newtons Laws	-20	-20	-20	-20
Conservation of Angular Momentum	-20	-20	-20	-20
Characteristics of Motive Forces	-20	-20	-20	-20
Ignores the gravitational force	-20	-20	-20	-20
Ignores the frictional force	-20	-20	-20	-20



THE GREAT CRUSTAL SHIFT HOAX

Criterion	White	Hapgood	Thomas	Davidson
Misunderstands rotational axes in free space	-20	-20	-20	-20
Subtotal 0 through -120	-120	-120	-120	-120
Total Evaluation Score (negative = invalid)	-116	-113	-112	-112

Violations of the Laws of Physics and Nature

The imaginary centrifugal force theories all break the same laws of physics and nature.

- **Violation: Use of an Imaginary Centrifugal Force.** The theories all use the *imaginary* centrifugal force. If the centrifugal force existed, the marble would roll off the table, and the skateboarder would move on his frictionless wheels. It does not matter the masses of the marble and skateboarder are smaller than the ice caps – both objects are spinning around the rotational axis of the Earth at the same speed as the table and ice caps. Since neither the marble nor the skateboarder moves, the imaginary centrifugal force is ... *imaginary*. It does not exist. Thus, all three theories violate the known laws of physics and nature and are invalid.
- **Violation: Newton's First Law of Motion.** All three theories call for the crust to shift and move the polar regions to the equator, where the shift will stop. But that requirement breaks Newton's First Law of Motion, which states that a body will remain at rest or in motion until acted on by a (real) force. All three theories break Newton's First Law because they call for the crust to shift and accelerate and then decelerate while not specifying a real force. Thus, all three theories violate Newton's First Law and are invalid.
- **Violation: Newton's First and Second Laws.** None of the theories specify how to decelerate the entire crustal shell under force. Even if the imaginary centrifugal force could *accelerate* the entire crustal shell of the planet, Newton's First Law requires the crust to stay in motion (a body in motion will remain in motion...). But the three theories say nothing about how the crust would *decelerate* to stop in the region of the equator. Newton's Second Law says that the acceleration of an object is proportional to the size and direction of the motive force. Because the imaginary centrifugal force cannot reverse direction, it *cannot* decelerate the crust. Thus, all three imaginary centrifugal force theories break both Newton's First and Second Laws and are invalid.
- **Violation: The Law of Conservation of Angular Momentum.** All three theories specify that the inner core continues to rotate as usual during the shift. But the Law of Conservation of Angular Momentum requires that any change to the momentum of the crust must also be accompanied by an equal and opposite change in the momentum of the core. Thus, all three theories violate the Law of Conservation of Angular Momentum and are invalid.
- **Violation: Known Laws of Nature.** All four theories specify that their motive forces (real magnetic or imaginary centrifugal forces) will split, reverse, or behave in unnatural ways. The



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military/RAND theory in White's book specifies that the magnetic *field* force will (somehow) grip the non-magnetic crust, *and only the crust*, accelerate it toward the equator, and then *switch directions* and decelerate the crust to stop at the equator. The magnetic force must split and be zero within the core and then suddenly be full strength above the asthenosphere. But these behaviors violate the known laws of field forces, and therefore the military/RAND magnetic field crustal shift theory is not valid. The three theories based on imaginary centrifugal forces require the imaginary force to accelerate the crust to a peak speed as fast as the fastest Learjet and then reverse direction halfway through the shift to decelerate the crustal shell of the planet. Thus, the theories based on the imaginary centrifugal force are also invalid.

- **Violation: The Law of Gravitational Force.** All four theories completely ignore the gravitational force, as if it did not exist. But gravity does exist. Gravity also acts on the crust and is responsible for keeping the crustal elements from escaping into free space. By completely ignoring the gravitational force, all four theories violate the known laws of nature and are invalid.
- **Violation: The Law of Frictional Force.** The frictional force is generated by the gravitational force and resists any crustal shift motion between the crust, asthenosphere, and mantle. All four theories completely ignore the frictional force. The military/RAND theory said that the magnetic force would “impel” the crust to follow (much hand-waving and vagueness there). The three imaginary centrifugal force theories wave their collective hands and call for “a layer that allows it,” a liquification of the magnetohydrodynamic layer, or an “unlocked” crust. None of them cite a numerical estimate for the crustal mass, the normal force, the coefficient of friction, or the resulting frictional force. All four theories violate the known laws of nature, which specify that frictional forces do exist.
- **Violation: Rotational Axes in Free Space.** Neither end of a rotational axis is fixed in free space. Thus, the behavior of the rotational axis of Earth is very different than the behavior of the rotational axes of turbines (both ends fixed), old washing machine drums (one end fixed), or figure skaters (one end mostly fixed). By definition, a rotating object (or system of objects) in free space is *always* balanced around its rotational axis because the axis is *defined* to be the neutral line about which the objects rotate. If masses within the rotation in free space are somehow repositioned (a crustal shift), the rotational axis will change instantaneously to reflect the repositioning. Since all four theories treat the rotational axis of the crust as variable and the rotational axis of the core as fixed, all four theories violate the known laws of nature and are invalid.

The table of evaluation scores makes it plain to see that all the theories are *incomplete* and insubstantial. They do not address at least half the key questions and issues about crustal shifts, and none of them engage with the real physics of accelerating the entire crust of the Earth to a peak speed that is as fast as the fastest Learjet. All four theories of the crustal shift are obviously invalid.



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Conclusion

The purpose of this work was to show that crustal shifts are not a valid option for catastrophism because crustal shifts violate too many of the known laws of physics and nature. Accordingly, no one needs to worry about a crustal shift that will move the poles to the equator in 24 hours or less. No one needs to prep by moving to higher ground or to a location that will avoid giant tidal waves or slosh-backs of the oceans.

This book evaluated four crustal shift theories with criteria that included general criteria, specific criteria for crustal shifts, and several known laws of physics and nature. All four theories proposed crustal shifts as the mechanism to explain anomalies in the geological record.

All four theories scored very low using the first set of general criteria for serious theories. All four theories scored very low using the second set of specific criteria for serious crustal shift theories. All four theories broke many known laws of physics and nature.

None of the four theories included even the most basic, first-year physics calculations about the masses, forces, accelerations, and speeds involved in the crustal motions claimed by the theories. Finally, all four theories violated many known laws of physics and nature.

The conclusion of this book is that all four theories were incomplete and poorly explained. All four theories would be *obviously* invalid to any competent first-year university physics student. Three of the four theories used an *imaginary* centrifugal force. Two of the three theories proposed accelerating the entire crustal shell to nonsensical peak speeds as fast as the fastest Learjet.

Crustal Shifts are Not an Option for Catastrophism

The meaning of this work is that crustal shifts *cannot* explain the anomalies in the geological record. Catastrophism must find a different, more credible mechanism to explain the relevant evidence.

But Catastrophism Can Still Be Valid

Nonetheless, this work does not invalidate the main concept of catastrophism, which is that the Earth has undergone many catastrophic changes in the past 100,000 years. A significant amount of geological evidence supports the concept of cataclysms. Much of the evidence is available online and in geological journals of the present day.

Davidson has gathered and organized an impressive amount of evidence in both book and video formats over the past decade on his *Suspicious Observers* YouTube channel and website. His work is particularly notable because it recounts both the existing and new evidence in support of catastrophism, including modern-day evidence from solar and galactic influences. Accordingly, it is



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difficult to rationally ignore or escape the building collection of evidence for a modern-day catastrophe.

Davidson also provided a table summary of the most recent 12,000-year events.

Excursion Name	Estimate Time	Biosphere Impact /10
Gothenburg	~12,000 years ago	8/10 (Severe)
Lake Mungo	24 - 28,000 years ago	4/10
Mono Lake	33 - 37,000 years ago	5/10
Laschamp	41 - 46,000 years ago	8/10 (Severe)
Vostok/Greenland	~60,000 years ago	5/10
Toba	~72,000 years ago	9/10 (Extreme)
???	~84,000 years ago	<4/10
???	~96,000 years ago	<4/10
Blake	105-115,000 years ago	8/10 (Severe)

But Davidson needs to give up the crustal shift hoax and find a different, more rational mechanism to carry out the catastrophic event.

For the convenience of readers, the next section mentions a related theory of catastrophism.

Velikovsky and Near-Range Catastrophism

Velikovsky, in his landmark book *Worlds in Collision* (Velikovsky1950), also provided a *massive* collection of evidence that explained some catastrophic events in **geologically recent times (circa 1500 BC, 3500 years ago)**. In contrast, Davidson's work concentrates on far-range catastrophic events based on the 12,000-year cycle for **the past 100,000+ years** (as shown in the table above).

Velikovsky's evidence for catastrophism was gathered largely from eyewitnesses. They either wrote down what they saw in ancient writings or described what they saw in legends and stories that were passed down through the oral history of their cultures from around the entire world. These kinds of written eyewitness and oral histories are special because they do not depend on the interpretations, distortions, or speculations of modern mainstream scientists. Velikovsky's human eyewitnesses simply wrote down what they saw or passed on the oral histories of their cultures.

The evidence gathered by Velikovsky unequivocally described a catastrophic event circa 1500 BC, about the time of the biblical Exodus, where *the earth turned over* during the event. Hundreds of eyewitnesses from all around the world reported that the Sun lost its position in the sky, rose in the



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West and then the East and then the West again, moved obliquely and in all four directions across the sky, and sometimes even reversed its travel in the middle of the day.

Velikovsky's huge amount of evidence goes on and on and on. It is easily available on the Internet if you want to read it for yourself.

His evidence always tells the same story - of catastrophic destruction, conflagrations, earthquakes, mountains rising and falling, great floods, and the stars and Sun losing their positions in the sky.

His book, *Worlds in Collision* (Velikovsky 1950), is *astounding* to first-time readers.

The Earth Turned Over

If you believe the *hundreds* of independent writings and oral histories of Velikovsky's eyewitnesses, and if the known laws of physics disallow crustal shifts, then the conclusion is inescapable. *The Earth turned over circa 1500 BC*. It was a spectacular example of catastrophism in recent geological history.

On the other hand, if you want to discount or escape that conclusion because it seems impossible, you might research the Intermediate Axis Theorem of physics. That theorem specifies that the angular momentum of a rotating body can change the orientation of the body as the energy in the body moves from one rotational axis to another. Two excellent visualizations of the effect are here <https://youtu.be/1x5UiwEEvpQ> on the *Truth Simplified* YouTube channel and here <https://youtu.be/NJLdW4DHRcA> on the *Physics Unsimplified* YouTube channel.

If the eyewitness evidence gathered by Velikovsky is correct, then one plausible explanation of the event could be based on the Intermediate Axis Theorem. The gravitational force from a (very) nearby body (Venus) that was similar in size to Earth could draw enough deep ocean water from the southern hemisphere off-axis, like a giant tide, to one side of Earth's main rotational axis.

That off-axis mass could then create an unstable intermediate axis that could easily turn the Earth over, as explained in [the excellent Physics Unsimplified animated video](#). It could do so without breaking the known laws of physics. It could do so while still agreeing with the *hundreds* of human testimonials written down in ancient documents and reported by Velikovsky.

Velikovsky's work shows what the 1500 BC catastrophe looked like. It turned the Earth over and inflicted massive flood destruction on much of the planet. One might wonder if turning the Earth over could have had any influence on unsolved geology problems. Could it explain the presence of tropical tree-trunk fossils in the polar regions? Could it explain the anomalies in the carbon dating of objects that were assumed to be of Earthly origin but perhaps originated on Jupiter or Venus before being rained down on Earth during the Exodus catastrophe?

Fortunately, many eyewitnesses wrote their observations down for us to read about. Read the documents and draw your own conclusions.



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The Upcoming Event

Catastrophism is an important topic for our time because something very bad has happened to Earth and its civilizations every 12,000 years or so over the past 100,000 years.

And the time is here again. It has been about 12,000 years since the last ice age. The magnetic poles have moved significantly away from their normal locations, and the magnetic field strength of the Earth's magnetosphere is weakening. Other solar and interstellar indicators have also shown strange occurrences that are sequentially approaching Earth. (Davidson does a nice job of describing them.)

Currently, the best estimates from multiple sources for the next event range from about 2030 to 2050. Predictions call for an increasing series of solar flares and coronal mass ejections, seismic events, storms, floods, and climate anomalies leading up to the big event.

Loss of the electrical grid on some parts of the planet seems to be inevitable because of a weaker protective magnetic field and the increased probability of strong solar flares or mass ejections that might be aimed straight at Earth.

The source of the next event is believed to be caused by the movement of our solar system within the galaxy (crossing the galactic current sheet), and there is nothing humanity can do about it. The exact mechanism of destruction is not known to us at the present time, but at least we know that The Great Crustal Shift Hoax of Catastrophism will not be the mechanism for the big event.

That means you don't have to worry about a crustal shift happening any time soon in this universe. That is unless you – like Einstein, Hapgood, Thomas, and Davidson - want to use an *imaginary* centrifugal force and completely ignore Newton's Laws of Motion, the Law of Conservation of Angular Momentum, the gravitational force, the frictional force, and other laws of the universe.

Hapgood, Thomas, and Davidson have collectively invented and propagated a great hoax about an *imaginary* crustal shift driven by *imaginary* centrifugal forces with *imaginary* consequences. It staggers the logical mind that Davidson, with about 750,000 subscribers to his YouTube channel, continues to propagate the crustal shift hoax daily as part of his channel's catastrophism topic. His daily animated video graphics and reviews of solar and geophysical research papers are impressive, but he studiously avoids the simple first-year physics of the crustal shift. Why?

Other Videos to Watch

The references section contains some extra video links from the *See the Pattern* YouTube channel and some extra book references that readers might find interesting.



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References

Thomas1963. **Thomas, Chan.** 1963. *The Adam and Eve Story*, 3rd Ed. Archive.org. <https://dn790003.ca.archive.org/0/items/TheAdamAndEveStory/The%20Adam%20and%20Eve%20Story.pdf>. Accessed 2023-06-09. 1993. *The Adam and Eve Story, A History of Cataclysms*. Archive.org. <https://archive.org/details/e-book-chan-thomas-the-adam-and-eve-story-the-history-of-cataclysms-1993-full-uncensored>. Accessed 2023-06-09.

Davidson2021-1. **Davidson, Ben.** 2021. *The Next End of the World*. Davidson. Available from the website <https://SuspiciousObservers.com>.

Davidson2021-2. **Davidson, Ben.** 2021. *THE Earth Disaster Cycle*. Video (1:33:22). <https://youtu.be/ihwollxHI3Q>. Accessed from the Suspicious Observers YouTube channel 2023-06-09.

Davidson2023. **Davidson, Ben.** 2023. *Earth Disaster is Coming | All the Evidence*. Video (16:45). <https://youtu.be/j635Cv2aOLA>. Accessed from the Suspicious Observers YouTube channel 2023-06-09.

Hapgood1958. **Hapgood, Charles.** 1958. *Earth's Shifting Crust: A Key to Some Basic Problems of Earth Science*. Pantheon Books. Archive.org. <https://archive.org/details/eathsshiftingcru033562mbp/page/n7/mode/2up>. Accessed 2023-06-07.

Velikovsky1950. **Velikovsky, Immanuel.** 1950. *Worlds in Collision*. Doubleday & Co. Archive.org. <https://archive.org/details/B-001-014-474>. Accessed 2023-06-09.

Velikovsky1955. **Velikovsky, Immanuel.** 1955. *Earth in Upheaval*. Doubleday & Co. Archive.org. <https://archive.org/details/EarthInUpheavalVelikovsky>. Accessed 2023-06-09.

VelikovskyInfo. **Velikovsky, Immanuel.** *The Immanuel Velikovsky Encyclopedia*. www.Velikovsky.info. Accessed 2023-06-09. A summary of his work and theories.

White1994. **White, Ken.** 1994. *World in Peril: The Origin, Mission & Scientific Findings of the 46th/72nd Reconnaissance Squadron*. White. Also released as *World in Peril: The Story Behind the Discovery of Imminent Global Change*. White. Archive.org. <https://archive.org/details/worldinperiltheorigin>.

Related Videos

SeeThePattern-1. **See the Pattern.** *Hapgood's Earth Crust Displacement Theory*. Video (21:56). <https://youtu.be/IXpmhsvkvBQ>. Accessed 2023-06-13.

SeeThePattern-2. **See the Pattern.** *Chan Thomas: The Adam and Eve Story, Fact or Fiction?* Video (30:06). <https://youtu.be/WJIMMuoz9Rw>. Accessed 2023-06-13.